

Easton Yi HUANG

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EDUCATION

Ph.D. in Mechanical & Aerospace Engineering

Rutgers University–New Brunswick, School of Engineering

Aug. 2024 - Present

M.Sc. in Mechanical Engineering

National University of Singapore, College of Design and Engineering

Aug. 2022 - Jan. 2024

B.Eng. in Mechanical Design & Manufacturing and Their Automation

Dalian University of Technology, School of Mechanical Engineering

Sep. 2018 - Jul. 2021

NUS Suzhou Research Institute

Sep. 2021 - Jul. 2022

RESEARCH EXPERIENCE

NextG-Enabled Manufacturing of the Future (NextGEM)

Rutgers, New Brunswick, USA

Instructor: Prof. Jingang Yi & Prof. Yuebin Guo

2024 - Present

- Keywords: Physics-Informed Machine Learning; Digital Twins; Manufacturing.

Digital Twins Integrated Finite Element Analysis

NUS, Singapore

Instructor: Prof. Andrew Yeh Ching Nee & Prof. Ong Soh Khim

2022 - 2024

- Keywords: Digital Twins; Structural Health Monitoring; Finite Element Analysis; Machine Learning; Surrogate Model.

Intelligent Machine Vision for Surface Condition Inspection

NUSRI, Soochow, China

Instructor: Prof. Wen Feng Lu

2021 - 2022

- Keywords: Machine Vision; Defect Detection; Deep Learning; Denoising.

Development of Height-adjustable Small Stool

DUT, Dalian, China

Undergraduate Innovation and Entrepreneurship Training Program

2021 - 2022

Instructor: Dr. Tieli Zhu

- Keywords: Structural Design and Optimization.

Material Damage Modeling based on Multi-sensor Data

DUT, Dalian, China

Undergraduate Innovation and Entrepreneurship Training Program at national level

2020 - 2021

Instructor: Prof. Wei Liu

- Keywords: Drilling of CFRP; Multisensor Measurement; Machine Learning.

COURSE PROJECTS

- Dynamics for Biped Robot Walking**

Module Name: Analytical Dynamics

- Spatio-temporal Prediction based on Data-driven Machine Learning: Earthquakes Case**

Module Name: Data-Driven Engineering and Machine Learning

- Predicting Additive Manufacturing Parameters based on Acoustic Analysis**

Module Name: Engineering Acoustics

- Calculate and Optimize the Carbon Emissions of Product**

Module Name: Sustainable Product Design & Manufacturing

- Structural Design and Analysis of Quadruped Walking Robot**

Module Name: Mechanical Design 1 Course Design

- Gear Reducer Design and Optimization**

Module Name: Mechanical Design 2 Course Design

OTHER EXPERIENCE

- **Teaching Assistant, Course: 14:650:401–Dynamic Systems and Controls (Fall 2025)**
2025-2026, Rutgers University, Advisor: Prof. Annalisa Scacchioli
- **Graduate Assistant**
2024-2025, Rutgers University, Advisor: Prof. Jingang Yi
- **China Robotics and Artificial Intelligence Competition**
Smart Agriculture Contest, Instructors: Dr. Feilong Wang & Prof. Shenglan Liu
- **Kaggle Competition**
UW-Madison GI Tract Image Segmentation (UWMGI)
- **Dalian University of Technology Varsity Self-Reliance Society**
Vice President (Junior), Office Manager (Sophomore), Outreach Officer (Freshman)

AWARDS

- Raisler Fellowship from Rutgers University.
- Dongguan Entrepreneur Scholarship in 2024.
- First Prize in China Robotics and Artificial Intelligence Competition.
- Learning Excellence Award in DUT.
- Honorary title of Outstanding Officer of Dalian University of Technology Self-Reliance Society.

PUBLICATIONS

- C1. **Y. Huang**, F. Han, W. Liu, J. Yi, Y. Guo. “Machine Learning-based Online Stability Lobe Diagram Estimation and Chatter Suppression Control in Milling Process,” in *Proc. Amer. Control Conf. (ACC)*, 2026, New Orleans, LA, USA. (Accepted)
- C2. F. Han, **Y. Huang**, J. Yi. “Active Training Data Selection for Gaussian Process-Based Robot Dynamics Learning and Control,” in *Proc. IEEE/RSJ Int. Conf. on Intell. Robots and Syst. (IROS)*, 2025, Hangzhou, China.
- C3. **Y. Huang**, F. Han, J. Yi. “Data-Efficient Learning-Based Estimation of Region of Attractions for Nonlinear Dynamic Systems,” in *Proc. IEEE Int. Conf. Autom. Sci. Eng. (CASE)*, 2025, Los Angeles, CA, USA.
- C4. **Y. Huang**, F. Han, T. Zheng, L. Hu, J. Yi, Y. Guo. “Physics-Informed Machine Learning-Based Chattering Prediction in Milling Process,” in *Proc. Amer. Control Conf. (ACC)*, 2025, Denver, CO, USA.
- C3. **Y. Huang**. “Intelligent Machine Vision for Detection of Steel Surface Defects with Deep Learning,” in *Proc. IEEE Int. Conf. Smart Internet Things (SmartIoT)*, 2023, Xining, China.

PAPER REVIEW

- American Control Conference 2025, 2026
- IEEE International Conference on Automation Science and Engineering 2025
- IEEE International Conference on Intelligent Transportation Systems 2025
- IEEE International Conference on Robotics and Automation 2026