

# Easton Yi HUANG

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## EDUCATION

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### **Ph.D. in Mechanical 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

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### **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.

## OTHER EXPERIENCE

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- **Teaching Assistant, Course: 14:440:291–Honors Engineering Mechanics: Statics (Spring 2026)**

2025-2026, Rutgers University, Advisor: Prof. Onur Bilgen

- **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

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- 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

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- 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

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| • 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       |