

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

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

- **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**

2025-2026, Rutgers University, Advisor: Prof. Jingang Yi

- **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)

SKILLS

Unity3D, ANSYS (Workbench & APDL), Python, MATLAB, Arduino, Solidworks, CAD, Android Studio, HTML.

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

- **Y. Huang**, F. Han, J. Yi. 'Data-Efficient Learning-Based Estimation of Region of Attractions for Nonlinear Dynamic Systems,' 2025 IEEE 21st International Conference on Automation Science and Engineering (CASE). (Accepted)
- **Y. Huang**, F. Han, T. Zheng, L. Hu, J. Yi, Y. Guo. 'Physics-Informed Machine Learning-Based Chattering Prediction in Milling Process,' 2025 American Control Conference. (Accepted)
- **Y. Huang**, 'Intelligent Machine Vision for Detection of Steel Surface Defects with Deep Learning,' 2023 IEEE International Conference on Smart Internet of Things (SmartIoT), Xining, China, 2023, pp. 326-327, doi: 10.1109/SmartIoT58732.2023.00059.