

# Easton Yi HUANG

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## EDUCATION

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### **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

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### **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

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- **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

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- **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

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

## AWARDS

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- 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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- **Y. Huang**, A.Y.C. Nee, S.K. Ong. Structural Health Monitoring using Digital Twin Integrated Finite Element Analysis Method. (Being written now)
- **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.
- 祝铁丽,时灏烨,林宏彬,李传杰,黄屹,孙先成. 握笔姿势矫正器[P]. 辽宁省: CN214449773U,2021-10-22.