Easton Yi HUANG

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EDUCATION

Ph.D. in Mechanical & Aerospace Engineering
Rutgers University–New Brunswick, Scbool 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)

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

C1. **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.

C2. **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.