

Yuan Yao

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Education

•Jilin University

2021.9-now

Bachelor of Engineering, School of mechanical and aerospace engineering

GPA: 3.76/4, rank within top 5%

•Tohoku University

2023.10-2024.8

Exchange student, Department of Robotics

8/9 Course grades: A/ AA

Research experiences

•Micro Electro Mechanical Systems Lab

2023.10-2024.8

Exchange student advised by Prof. Shuji Tanaka and Andrea Vergara

Tohoku University

- **Oral presentation** on the 37th International Microprocesses and Nanotechnology Conference (**MNC 2024**) [[Slides](#)] [[Abstract](#)]
- A paper under review for the conference extended special issue: **Yao, Y.**, Vergara, A., Tang, Z. & Tanaka, S. Feasibility study of layer separation using 2D patterned internal laser damage in silicon. *Japanese Journal of Applied Physics* [[Paper manuscript](#)]
- Experienced in clean room workflows and equipment operation:

Mask design	Mask Fabrication	Photolithography	Deep silicon etching (DRIE)
Sputtering	Ion beam milling	PVD/CVD	Optical/SEM/Infrared microscopy

•Key Laboratory of CNC Equipment Reliability, Ministry of Education

2022.9-now

Undergraduate research program advised by Prof. Hu Huang

Jilin University

- National Undergraduate Training Program for Innovation and Entrepreneurship(NCSIETP), **National Excellent Conclusion, securing research funding of 10,000CNY**
- Publish an Utility Model Patent: H. Huang, **Y. Yao**, Y. Huang, and H. Wu, “An ultrasonic vibration device for vibration-assisted scratch testing,” Chinese Patent CN 220649966U, Mar. 22, 2024. [[Patent](#)]
- Published a paper: Huang, Y.; Wu, H.; **Yao, Y.**; Zhao, H.; Huang, H. An Ultrasonic Vibration Scratch Tester for Studying the Scratch Characteristics of Materials under Ultrasonic Vibration Contact Status. *Actuators* 2024, 13, 262. <https://doi.org/10.3390/act13070262>

Skills

- **Languages:** Native Mandarin; Fluent English including IELTS: 7.0 (6.5), CET4: 622, CET6: 559, GRE: 320; Basic Japanese
- **Professional Software:** Proficient:Solidworks, Autocad; Intermediate: Catia; Ansys, Abaqus, Recurdyn; Matlab Simulink, Origin
- **Basic Programming Skills:** Python, Matlab, C#, L^AT_EX

Awards and Honors

National second prize- National University Students' Advanced Drawing Technology and Product

• Information Modeling Innovation Competition

Content: Advanced Engineering drawing and proficient in CAD software [[Link](#)]

2022.8

Provincial first prize - China College Students Engineering Practice and Innovation Competition

Content: Designed and fabricated an auto-turning mini-car prototype [[Link](#)]

2023.11

• Exchange student scholarship - Japan Student Services Organization

2023.10-2024.8

• First-class scholarship - Jilin University

2023.11/ 2022.11

• Excellent student - Jilin University

2023.11/ 2022.11

• Excellent student leader - School of Mechanical and Aerospace Engineering, Jilin University 2022.11