Kanlong Ye

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EDUCATION

- **Carnegie Mellon University (CMU),** Pittsburgh, USA **Aug. 2024 - May. 2026**
  M.S. in Mechanical Engineering-Research (Robotics Track)
- **Dalian University of Technology (DUT),** Dalian, China **Sept. 2019 - Jul. 2024**
  B.E. in Mechanical Design & Manufacturing and Their Automation (Japanese Intensive)
- **Tohoku University (TU),** Sendai, Japan **Oct. 2022 - Aug. 2023**
  Exchange Student in Mechanical and Aerospace Engineering Department

HONORS

- 2021-2022 Undergraduate Innovation and Entrepreneurship Training Program at the National Level, DUT, Top 10%
- 2020-2021 Ethic Award Scholarship, DUT, Top 10%

ACADEMIC EXPERIENCE

- **Solar Meridian Extraction Method Based on Underwater Polarization** **Dec. 2023 - Jun. 2024**
  Graduation Thesis | Supervisor: Assoc. Prof. Ran Zhang, School of Mechanical Engineering, DUT

- Focused on the study of bio-inspired polarized light navigation using polarization angle images in an underwater Snell window for solar meridian acquisition.
- Designed a solar meridian extraction method based on the principle of Hough Transform and implemented an algorithm in C++ to automatically extract the solar meridian from the image.
- Applied my algorithm to find the solar azimuth angle, and the accuracy is verified to be within 1.5 degrees through outdoor experiments.
- Completed and defended the graduation thesis with distinction.

- **Si Piezosensor for Angle Control of Piezoelectric MEMS Micromirror** **Apr. 2023 - Aug. 2023**
  Research Assistant | Supervisor: Prof. Shuji Tanaka & Assist. Prof. Andrea Vergara, S. Tanaka Laboratory, TU

- Acquired a comprehensive understanding of the principles associated with MEMS processing and have gained hands-on experience in the complete process, encompassing deposition, photolithography, etching, dicing, wire bonding, and packaging.
- Designed an effective angle sensor structure for the slow axis of a 2D piezoelectric micromirror utilizing Si piezoresistors, resulting in enhanced feedback control sensitivity.
- Manufactured prototype testing devices (including cantilever and meandering structures) on a Silicon-on-Insulator (SOI) wafer equipped with integrated Si piezoresistors by employing doped wiring techniques.
- Conducted output characterization and performed a comparative analysis with simulation and calculation results.

- **Assembly Mechanism with Multi-Degree-of-Freedom Self-Optimization Capabilities** **Apr. 2021 - Apr. 2022**
  Core Member | Supervisor: Prof. Wei Liu & Assoc. Prof. Yang Zhang, School of Mechanical Engineering, DUT

- Conducted an extensive review of literature related to intelligent assembly and high-precision monitoring, building expertise in the field.
- Designed and implemented an online monitoring system for tool positioning using multiple parameter sensors. This system enables precise and efficient measurement of material strain states during assembly.
- The outcomes received national-level recognition under the 2021-2022 Undergraduate Innovation and Entrepreneurship Training Program.

EXTRACURRICULAR EXPERIENCE

- **Part-time Job at Lawson,** Sendai, Japan **Feb. 2023 - Jun. 2023**
  - Skilled in operations within Japanese convenience stores, adept at bilingual communication (Japanese and English) with a diverse international customer base.
- **Volunteer Teacher for Remote Junior High School Students,** Longling, China **Jun. 2021 - Jul. 2021**
  - Tutored junior high school students in mathematics online, with expertise in lesson planning and teaching, and effectively supported their academic and emotional growth.
- **Class Monitor & Member of the School's Press Corps,** Dalian, China **Oct. 2019 - Sept. 2020**
  - Coordinated group activities and led photography & new media promotion for major university events, including theatrical performances, lectures, and more.

SKILLS

***Language**: Chinese (Native), English (Fluent), Japanese(Fluent)*

***Programming:** C/C++,Python, MATLAB*

***Frameworks**: OpenCV, Pytorch, ROS*

***Software**: Inventor, AutoCAD, SolidWorks, Ansys, Office, Gazebo, PX4*