RUI WANG

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EDUCATION

University of California, Berkeley Exchange Student, Mechanical Engineering December 2017

Tsinghua University (China) Major: Mechanical Engineering* July 2019

Currently ranking **1/145, winner of ME student's highest scholarship*

Tsinghua University (China) Minor: Computer Science July 2019

SKILLS

Programming	C++, MATLAB, Python	**CAD**	Solidworks, AutoCAD
Embedded System	Arduino, Pixhawk, STM32	**Robotic System**	PX4, ROS
Language	English, Mandarin	**Prototyping**	3D printing, laser cutting

PROJECTS AND EXPERIENCE

Robotic Manipulation of Deformable Objects by Human Demonstration

Undergraduate Researcher, MSC Lab, UC Berkeley, CA July 2017 - Present

- Designed a path-planning algorithm to generate robot's trajectory according to object's point cloud information
- Generalized robotic manipulation of different scenarios into a general-purpose MATLAB project
- Succeeded in realizing rope-knotting, knot-untying, rope-straightening, cloth-folding with a dual-arm robotic manipulator system

Climbee, a Bee-inspired Wall-climbing Robot

Self-directed Researcher, Tsinghua University, Beijing, China December 2016 – May 2017

- Designed the robot's mechanical structure with AutoCAD and Solidworks
- Fabricated the robot using laser cutter and 3D printer, and the robot was able to climb up a 60 degrees wall
- Won Third Prize Award at Challenge Cup Competition at Tsinghua University, and applied for a patent

Intelligent Steel Safe

Course Project Director, Tsinghua University, Beijing, China March 2017 - May 2017

- Designed a steel safe prototype using the microcontroller board Galileo with sensors and a camera module
- Programmed with Python, used Azure's service to enable the steel safe to recognize human faces and voices

RoboCup, a Humanoid Robotic Competition

Member of Tsinghua Hephaestus Team, Tsinghua University, Beijing, China October 2016 - May 2017

- Learned the usage of ROS (the Robotic Operating System, under Linux) and relevant theories like Linear Inverted Pendulum model and Kalman Filter
- Programmed and simulated the dynamics of a humanoid robot with MATLAB

SELECTED HONORS

- **PetroChina Scholarship** (ME sophomore students' highest scholarship)
- **Third Prize** of the Challenge Cup Technology Competition at Tsinghua University
- **Member** of THU Spark Project*

  **Spark Project aims at supporting student innovation in technology, with 60 out of 3300 students selected each year*
- **Model Student** of academic records, **Model Student** of innovation in science and technology of Tsinghua
- **Second prize** in the 33rd Undergraduate Physics Competition in China
- **First Prize** of Chinese Physics Olympiad (in Provinces) (2015)
- **First Prize** of the National Olympiad in Informatics in Provinces (2013)

LEADERSHIP

Minister, Division of Academic Affairs , ME Association for Science and Technology June 2016 - Present

- Maintain mechinfo.me, a student-based website for information sharing and cloud storage
- Lead a team on web development and maintenance and train incoming members
- Coordinate academic resources collection and distribution for ME undergraduate students

Monitor , Class 51, Dept. of ME, THU 2015 - 2016 Academic Year

- Organized class activities and hosted class meetings, and won several awards for these activities