**Xiao Liang** • liangxiao010@sjtu.edu.cn • +86 13463247660 • 800 Dongchuan Rd. Shanghai China, 200240 •

**EDUCATION Shanghai Jiao Tong University（SJTU）**, Shanghai, China

*University of Michigan – Shanghai Jiao Tong University Joint Institute (UM-SJTU JI)*

B.Sc. in Mechanical Engineering *Sept 2015* *– Aug 2019 (expected)*

Overall GPA: 3.78/4.00 ; Major GPA: 3.93/4.00 (ranking 2/58)

**RESEARCH** **Design and Analysis of a Wheel-Leg Hybrid Robot with Novel Transformation Mechanism**

**EXPERIENCE** *Laboratory of Smart Solids and Structures* **(in progress of publication)** *June 2018* *– Present*

• Designed a vehicle robot with activelytransformed three-leg wheels

• Detected the obstacles by sensors to climb steps

• Conducted automatic control of wheel-transformation to pass through sand road and smooth road

• Applied torque and gait analysis of multi-leg transformable wheel tojustify the optimal design

**Rheological Behavior of Block Copolymer Manipulated by an External Electric Field**

*Advanced Polymeric Materials Laboratory Mar 2017 – Present*

• Used the electric rheometer and RheoCompass software to take experiments and analyze data

• Observed the mesophase formation, evolution and structure–rheology relationship

**SELECTED CCD Camera Imaging based on** **Monte-Carlo Algorithm (Silver Award)**

**PROJECTS** *VM450 Capstone Design Sept 2018 – Dec 2018*

• Designed a software-based optical imaging model to analog CCD camera imaging system

• Applied the Monte-Carlo Algorithm to optimize the path of rays and improve operating rate

• Compared small hole imaging and lens imaging and conducted feasibility analysis

**Motion Planning of Robot MORO: Roaming Obstacle Avoidance and Chassis Path Planning**

*VM467 Introduction to Robotics* *June 2018 – Aug 2018*

•Utilized the sensor system and SLAM algorithm to plan the path and control the movement

•Applied and compared the A star and Dijkstra algorithm in shortest path planning

**A Wireless Controlled Loading and Shooting Vehicle**

*VM250 Design and Manufacturing I June 2017 – Aug 2017*

•Designed and manufactured a wireless controlled vehicle

•Designed and installed a balls’ shooting system using leading crews, springs and electromagnet

**A Spi****nning Bike-based Air Purification Device**

*VG100 Introduction to Engineering June 2016 – Aug 2016*

·Designed and manufactured an exercise bike with belt transmission

·Designed and installed an air purification shell to pump out air through the filtration system

**WORK Undergraduate Education Office, UM-SJTU JI**

**EXPERIENCE** *Teaching Assistant* *Sept 2018 – Present*

• Worked as TA for one major course: VM395 Laboratory I

**Academic Advising Center, UM-SJTU JI**

*Student Advisor* *Sept 2017 – Present*

• Provide academic advice to JI students

• Hold workshops aiming to promote academic skills and share professional interests

**Yo-i Tech Corporation, Shanghai, China**

*Intern as Assistant Algorithm Engineer (Industrial Internet of Things) Jan 2018 – May 2018*

• Assessed the production line and transferred the production requirements to IIoT requirements

• Assisted in developing and improving the BFG intelligent balance management system

**EXTRA–**  *Vice-director,* Department of Career of Student Union, UM-SJTU JI *July 2016 – July 2017*

**CURRICULUM** *Vice-captain*, Mi Yuan Volunteer Group, UM-SJTU JI *July 2016 – July 2017*

**ACTIVITIES** *Core member*, Jeet Kune Do Club, SJTU *Mar 2016 – Present*

*Leader*, Professional Guiding Organization, UM-SJTU JI  *Sept 2017 – Present*

*Participant*, Volunteering Activities and Aid Education in Yunnan. *Dec 2015 – Jan 2016*

*Participant*, Dali Ecologic and Economic Creative Challenge Camp *Dec 2017 – Jan 2018*

**SELECTED** Honorable Mention in Mathematical Contest in Modeling  *Apr* 2*018*

**HONORS** Yu Liming Scholarship (Twice, top 0.5% in UM-SJTU JI)   *Nov 2016, Nov 2017*

National Scholarship (Twice, top 1% in SJTU) *Oct 2017, Oct 2018*

Undergraduate Excellent Scholarship (3 times, top 5% in SJTU)  *Dec 2016, Dec 2017, Dec 2018*

**SKILLS** Professional Software: UG NX, Origin, Mathematica, SolidWorks, AutoCAD, Latex, V-REP Pro

Programming Language: C/C++, MATLAB, Python, LabVIEW, Arduino

Language: Mandarin (Native), English (Fluent), German (Beginning) and Japanese (Beginning)