Changqing Lu

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Education	**Stanford University – Stanford, California**	GPA: 3.78/4.00
	M.S. in Mechanical Engineering, September 2019 to present	
	University of Michigan – Ann Arbor, Michigan	GPA: 3.94/4.00
	B.S.E. in Aerospace Engineering, September 2017 to April 2019	
	Shanghai Jiao Tong University – Shanghai, China	GPA: 3.67/4.00
	B.S.E. in Mechanical Engineering, September 2015 to August 2019	

Main Projects

Controllable Rotation of Electromagnetically Levitated Object *May 2019 to August 2019*

Active and strongly motivated member of a team of five
Generated the final solution concept and fully involved in design and manufacture
Fully responsible for the design and test of the PID rotation control system
Good interaction with team members, close follow-ups on project schedule and planning

Composite and Aluminum Landing Gear Impact Structural Test and Analysis *January 2019 to April 2019*

Test rig design and manufacture
Preliminary theoretical model analysis and prediction on structural impact
Test data collection with Raspberry Pi and acceleration sensors

Short-distance Electric Airplane Preliminary Design and Optimization *September 2018 to December 2018*

Preliminary theoretical aerodynamic analysis
Coded the optimization python framework for engineering parameters for the airplane
Validation on parameters with aerodynamic analysis of wing area

Autopilot Vehicle with Transformable Wheels on Multi-terrain Environment *May 2018 to August 2018*

Coded the control system on obstacle and terrain-type detection
Involved in structural design of the wheels and manufacture of the prototype vehicle

Research & Courses

Machine Learning on Airfoil Transition and Separation Location (research) *January 2019 to April 2019*

Integrated Xfoil with python and generated the airfoil parameter data collection
Used tensorflow package to predict the airfoil friction coefficient curves
Good prediction results with small amount of data

Heat Transfer Characteristics of Porous Materials (research) *May 2018 to August 2018*

Computational analysis on heat transfer characteristics of porous materials
Coded the python framework with openBTE for further research
Honor Undergraduate Research Program in UM-SJTU Joint Institute

Introduction on Fundamentals and Selections of Battery Materials (course) *May 2019 to August 2019*

Fundamental knowledge of rechargeable battery materials and electrochemistry
Review article on Solid Electrolyte Interphase (SEI) development and challenges

Computer Skills	Proficient in Matlab, python
	Familiar with Solidworks, CATIA, UX, Star CCM+
	Familiar with integration between microcontrollers (Arduino, Raspberry Pi) and sensors
Hobbies	Running, Photography
Personality	Self-motivated, Responsible, Self-disciplined, Perseverant
	Good listener, Team player