# Kangxu Wang

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## EDUCATION

University of Michigan – Ann Arbor — Expected Graduation Date: May 2016
B.S.E in Aerospace Engineering — GPA: 4.00 | 4.00
Shanghai Jiao Tong University– Shanghai, China — Expected Graduation Date: Aug. 2016
B.S.E in Mechanical Engineering — GPA: 3.56 | 4.00

## RESEARCH & WORK EXPERIENCE

**Computational Fluid Dynamics Methods Comparison** - University of Michigan Sept. 2015 – Dec. 2015

- Investigated the efficiency and robustness of explicit and implicit methods including Runge Kutta and Forward Euler
- Programmed the matlab scripts and shell scripts to test the cases for 33 methods with different time steps
- Communicated with flux-umich (advanced research computing cluster) and made pbs file to test cases in parallel

**Product & Quality Intern** – KUK (China) Co. Ltd, Shanghai Jul. 2015 – Aug. 2015

- Worked with coils and electronic systems production company
- Translated control plans in Product Data Management (PDM) System between Chinese and English
- Performed quality inspection of yoke disk and recorded data in Microsoft Excel

**Servo Driven Robot** – Shanghai Jiao Tong University Jun. 2015 – Aug. 2015

- Designed and built a servo driven acrylic robot which can move for 2 meters in 8 seconds
- Built ratchet wheels to make the two 180 degree servos produce the force on same direction
- Programmed on the servo control board USBSSC32 and optimized the speed by considering rotation speed, rotation angles, and delay time between rotations.

**Hovercraft Design and Prototyping** - University of Michigan Feb. 2015 – May. 2015

- Completed design-build-test cycle of hovercraft and integrated propulsion, electronics, and structural components to produce speed and maneuver control for competition
- Applied Finite Element Analysis (FEA) to ensure the stress of motor mount is under limit
- Optimized the shell design by drawing the CAD in CATIA and doing the CFD simulation via STAR-CCM

**Gyroscope Stabilization of Unstable Vehicles** - University of Michigan Oct. 2014 – Dec. 2015

- Simulated a two wheel cart balanced by a gyroscope implemented with PID, linear, and nonlinear controllers
- Programmed on Arduino and implemented non-linear controller
- Designed a matlab GUI to acquire encoder signal from Arduino Due

## ENGINEERING SKILLS

**Languages & Operating Systems**: Linux, C/C++, Matlab, Mathematica
**Engineering Software**: CATIA, Unigraphics/NX, AutoCAD, Xfoil, AVL, Arduino, Origin, LaTex, Microsoft Office

## HONORS AND AWARDS

Dean's List, UM-SJTU Joint Institute Summer 2013, Fall 2014
Excellent Academic Scholarship, third-class, Shanghai Jiao Tong University 2014