Gerry Chen

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Education

Duke University, Durham NC **Expected May 2019**
Pratt School of Engineering

- Majors: Electrical and Computer Engineering + Mechanical Engineering (BSE)
- Minor: Math
- 3.87/4.00 cumulative GPA, Dean's List every semester

Skills

- Strong command of Matlab and Python
- Proficiency in C++, Java, MATHEMATICA, LaTeX
- Embedded Software Development
- Path Planning + Classical Controls
- Eagle, SPICE, Solidworks, Autodesk Fusion
- Experimental design and sensor data acquisition

Activities

Co-President **08/2015 to Present**
Duke Electric Vehicles Team - Guiness World Record holder

- Co-lead hydrogen fuel cell hybrid vehicle for 2018 to achieve 14,573 MPGe (3 journal papers in progress)
- Design + Manufacture + Test the high power super-cap control board to increase vehicle efficiency by 22%
- Create an automated testing system resulting in fuel cell efficiency increase from 40% to 63%
- Design + Manufacture + Install the carbon fiber inserts to decrease weight and increase modularity
- 2018: 1st place H_2, 1st place battery-electric (12,398 MPGe), Technical Innovation Award

Project Lead **01/2016 to 01/2018**
Solar Benches

- Lead technical, financial, and administrative aspcts of augmenting existing campus benches with solar powered night-time task lighting and laptop/phone chargers to raise enthusiasm for clean energy
- Installed 2 test benches on campus after passing safety inspection on an off-site prototype bench

Work History

Controls Engineer Intern **05/2018 to 08/2018**
Deka R&D - Dirk Van Der Merwe

- Developed novel 2-wheel balancing control scheme with constrained wheel displacement (patent pending)
- Created multi-system integration over CAN, EtherCAT, RS232 to create hybrid wheeled/legged robot
- Developed stability control of robot w/ powered casters + differential steering to test high speed dynamics

Robotics Motion Planning Intern **01/2017 to 05/2018**
Intelligent Motion Labratory - Dr. Kris Hauser

- Submitted joint paper to IEEE International Conference on Robotics and Automation 2018 (Accepted 01/12/2018) - work funded by NSF Research Experiences for Undergraduates (REU) to implement a Precision Positioning Unit (PPU) on the Tele-Robotic Intelligent Nursing Assistant (TRINA)
- Coded (Python, C++) and tested max. continuous range / min. manipulatability arm configurations
- Fabricated polyurethane "finger" tip with integrated tactile sensor and 95.7% actuation success rate

Teaching Assistant **08/2016 to 05/2018**
Duke University

- EGR201: Mech. of Statics – Fall 2017
- ECE230: Microelectronics – Fall 2017
- EGR103: Comp. Methods in Eng. – Fall 2016
- CS201: Data Struct. & Alg. – Fall 2016

Tutor **05/2014 to Present**
Multiple Employers

- Duke Academic Resource Center - Multivariable Calc, Lin Algebra, and Differential Eq 08/2016 to Present
- America Reads America Counts at Duke - Durham Public Schools 08/2015 to 06/2016
- Kumon Math and Reading Center of Fox Chapel - Math and Reading 05/2014 to 08/2016