Walker Gosrich

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Education

University at Buffalo, The State University of New York (UB) – GPA: 4.0/4.0

Bachelor of Science, Engineering: Expected May 2018
Major: Mechanical Engineering, Minor: Computer Science
Awards: Goldwater Fellowship (2017), Mechanical and Aerospace Engineering Humanitarian Award (2017), UB Presidential Scholarship (2014), Freshman Engineering Dean's Award (2014), Grace Capen Academic Award (2016)

Plattsburgh Senior High School (PHS) – GPA: 98.5/100

Advanced Regents Diploma with Honors: June 2014
Awards: Class of 2014 Valedictorian, Champlain Valley Regional Science Fair Winner

Research and Experience

Fall 2017: *Autonomous Construction System* Contact: Nils Napp / nnapp@buffalo.edu

Created a robotic agent capable of perception, planning, and locomotion across uneven terrain, for use in evaluating autonomous construction methods. Along with two graduate students, used this robot to autonomously construct and climb an access ramp out of filled bags. Led to a pending submission to ICRA 2018, and presentations at NERC 2017 and NASEC 2017.

Summer 2017: *Micro-robot Locomotion* Contact: Sarah Bergbreiter / sarahb@umd.edu

Created data-informed mathematical models of milligram-scale robot walking and running, based on experiments using the smallest ever walking robot. This helped towards an understanding of locomotion at this scale, which could impact robot locomotion performance. Led to a pending submission to the MEMS 2018 Conference.

Summer 2016: *Liquid Metal 3D Printer for Soft Robots* Contact: Yiğit Mengüç / yigit.menguc@oregonstate.edu

Developed a novel liquid metal 3D printer and printing process for eGaIn, an alloy of Indium and Gallium which is liquid at room temperature. The printer lays down liquid metal to create the circuits of soft robots as part of a system to completely 3D print soft robots being developed at Oregon State University. Presented at NERC 2016.

Fall 2015 - Spring 2017: *Robotic Hand Research* Contact: Nils Napp / nnapp@buffalo.edu

Modified Yale OpenHand gripper to incorporate sensors and be fully 3D-printable. Designed a system to automatically optimize gripper properties towards any user-specific task. For this work, won second prize in the Silent Hoist and Crane Materials Handling Paper Competition.

Leadership and Involvement

2017 FAFSA Completion Intern with the FAFSA Completion Project in the BPS
The Enchords A Cappella - Musical Director (since 2016)
UB Pi Tau Sigma Mech. Eng. Honors Society – President and Chapter Co-founder (since 2015)
2016 Volunteer and volunteering coordinator in Hutchinson Tech. High School
2014 Volunteer in Buffalo Public School #31 for the UB ISEP Program
Advertising and on-site volunteer for the Western New York Sustainable Energy Association

Skills

Multiple CAD Platforms
MATLAB
Linear Programming
3D Printing
Laser Cutting
Machining Skills
Java
C++
Python
HTML/CSS/JavaScript
Circuit Design – Eagle
Robot Operating System

Courses

Statics & Dynamics
Engineering Applied Math
Engineering Design I & II
Linear Alg., Prob. Theory
Java I & II
Data Structures