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EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY, College of Engineering **Atlanta, Georgia**
Bachelor of Science in Mechanical Engineering *May 2019*
- **Minors:** Computer Science (Intelligence), Robotics GPA: 4.0
- **Relevant Coursework:** Advanced Calculus, Artificial Intelligence, Computer Vision, Control of Dynamical Systems, Data Structures and Algorithms, Differential Equations, Digital Signal Processing, Electronics and Circuitry, Machine Design and Manufacturing, Numerical Methods, Robotics, System Dynamics

RESEARCH

EPIC PROSTHETIC ROBOTICS LAB **Georgia Institute of Technology**
Powered Knee and Ankle Prosthetic *January 2017 – Present*
- Leading a large biomechanics study to find correlations between a subject's sensor readings and their walking parameters
- Implementing machine learning classification and sensor fusion algorithms on gathered EMG, goniometer, and IMU data
- Manufactured a robotic powered prosthetic leg to aid above knee amputees in various community ambulatory modes

ROBOTIC MANIPULATION AND SAMPLING (347G) **NASA Jet Propulsion Laboratory (JPL)**
Controls and Autonomy Software Engineering Intern *May 2018 – Aug 2018*
- Implemented cartesian and force motion controllers on a 3-DOF robotic arm for potential future sampling of Enceladus
- Developed post-processing algorithms to calculate gravity compensation and cutting forces for various sampling tools

AMBER BIPEDAL ROBOTICS LAB **Georgia and California Institutes of Technology**
1-Dimensional Hopping Robot *June – August 2017*
- Analyzed the hybrid affine system of the hopping robot and developed a controller optimized for energy efficiency
- Designed and machined advanced mechanical systems (i.e. eccentric pulleys, mechanical clutches) for the hopping robot

Compliant Robotic Calf *May – August 2016*
- Jointly designed and manufactured spring point contact legs with linear position feedback for the AMBER-3M robot
- Acknowledgement in locomotion economy paper presented at CCTA (Aug 2017)

PUBLICATIONS

Co-Author, "Sampling Tool Concepts for Enceladus Lander In-situ Analysis" *March 2019*
- Accepted for publication at the IEEE Aerospace Conference

SKILLS

Coding: C, Java, Linux, Matlab; Basic Skills in Arduino, C++, LabView, OpenCV, Python
Software: Solidworks (CAD), Fusion 360 (CAD/CAM), Surfcam (CAM), Microsoft Office Suite
Language: English (native), German and French (limited working proficiency)
Machining: 3D Printer, Laser Cutter, Lathe, MIG Welder, 3-axis CNC Mill, Soldering, Rapid Prototyping, Waterjet
Interests: Baking, Cycling, DIY, Hiking, Rock Climbing, Traveling

PROJECTS

Cinematic Robotic Arm *September – December 2018*
- Worked with a team of engineers to make a 6 DOF robot track a person's face while avoiding approaching objects
- Used potential fields to control the robot to desired locations while avoiding workspace and singularity constraints
- Communicated between image processing in Python, simulation and planning in Matlab, and Epson control interface

AWARDS & HONORS

Faculty Honors (Georgia Institute of Technology) *December 2016 – Present*
President's Undergraduate Research Award (Georgia Institute of Technology) *June 2017, June 2018*
Summer Undergraduate Research Fellowship (California Institute of Technology) *April 2017*
Mechanical Engineering Oral Presentation: 3rd place (Georgia Institute of Technology) *April 2017*