

# Fletcher Porter

+1 (626) 321-6687 · me@FletcherPorter.com · <http://FletcherPorter.com> · Class of 2019

## Education

**University of California, Santa Barbara (UCSB)** · Graduation June 2019

- Bachelor's in Mechanical Engineering
- Exchange study from Aug. 2017 to June 2018 at Lunds Tekniska Högskola (LTH) in Lund, Sweden
- Courses in robotic control at UCSB including physics-based modeling
- Course in design with polymer composite materials

## Experience

**NASA/JPL Internship** Robotic Mobility on Icy Moons · 11 June 2018–7 Aug. 2018

- Designed and led the fabrication and assembly of the mechanical and electrical systems for a gravity-offload system (GOS) used to study robotic mobility for future missions to icy moons
- Developed and implemented a control system for the GOS which uses computer vision
- Operated the disaster recovery robot RoboSimian to conduct tests
- Conceived new robotic systems for a sampling system to study soil in Death Valley, California

**NASA/JPL Internship** Ocean Worlds Mobility and Sensing · 14 June 2016–26 Aug. 2016

- Designed a level wind for the Deep Subsurface Access (DSA) probe
- Performed testing on DSA drivetrain to verify the design for the larger assembly
- Generated creative ideas for a sample transfer mechanism on the DSA probe
- Designed, built, and tested the actuation for an extensible arm for sampling on Europa

**NASA/JPL and UCSB Robotics Lab Internship** RoboSimian · June–Aug. 2014, Oct. 2015–May 2016

- Worked in the UCSB robotics lab with Katie Byl
- Designed components for a novel robotic manipulator for RoboSimian
- Rapid prototyped components using a laser cutter and 3D printer to aid iterative design
- Developed roller skates for RoboSimian to significantly increase locomotive speed

## Projects

**Northrup Grumman and UCSB Sensitive Electronics Carrying Case** · Sept. 2018–In Progress

- Designing a system to carry sensitive electronics to a test area while damping shock loads and reducing the load the carried by the user

**Mechatronics Course Design Project** Camera Window Cleaning System · Aug. 2017–May 2018

- Designed and built a compressed-air cleaning system for Axis Communications Security cameras

**FIRST Tech Challenge** Student Robotics Mentor · June 2015–Present

- Teaching high school students engineering design

## Publications

B. H. Wilcox, J. A. Carlton, J. M. Jenkins, and F. Porter, "A deep subsurface ice probe for Europa," in 2017 IEEE Aerospace Conference, pp. 1–13, March 2017.

A portfolio of my work can be found at <http://portfolium.com/fporter>