

Fletcher Porter

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Employment

UCSB Robotics Laboratory (Undergraduate Researcher) — 2015–Present

- Advised by Professor Katie Byl
- Designing feet with gecko adhesive pads for Boston Dynamics LittleDog robot
- Designed roller skates to increase locomotive speed of RoboSimian

NASA Jet Propulsion Laboratory (Robotics Intern) Summer 2016

- Performed breadboard test of subassemblies on OWMS Deep Subsurface Access Probe
- Produced figures for OWMS mission proposal
- Designed drivetrain and level wind for Deep Subsurface Access Probe
- Aided in design of Deep Subsurface Access Probe Sample Transfer Mechanism

NASA Jet Propulsion Laboratory (Robotics Intern) Summer 2014

- Researched cam-based robotic manipulator for use on RoboSimian
- Designed ventilation system for the in-lab laser cutter
- Conducted experiments to learn the behavior of gecko adhesive pads after many cycles
- Aided in design of stewart platform for use in zero-g testing

Activities

FIRST Robotics, Suit Bots 4628 (Mentor) — 2011–Present

- Helped students learn how to use SolidWorks
- Team member, 2011–2015; Team Captain 2015; Business Manager 2014
- Wrote autonomous programs using encoders and line detection to improve repeatability
- Designed and tested a mount to attach controllers to robots, DFM for CNC and injection moulding

Education

University of California, Santa Barbara, expected graduation 2019

- Majoring in Mechanical Engineering
- Wrote Wikipedia article on Optical PAYload for Lasercomm Science mission from JPL/Caltech
- Certified to work in UCSB machine shop

Skills and Interests

- 3-D Modeling with SolidWorks
- Machining with mills and lathes
- DFM for 3-D printing, laser cutting, CNC, and injection moulding
- Programming in C++, Python, Matlab, L^AT_EX, and Mathematica
- CPR Pro and Wilderness First Aid certified

Awards

- Excellence Award for Multimedia Writing for Optical PAYload for Lasercomm Science Wikipedia Article from UCSB Engineering Writing Program
- Louis Armstrong Award
- Eagle Scout Rank, Boy Scouts of America