

Eric P. Stern

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EDUCATION

University of California, Berkeley

Masters of Engineering, Mechanical Engineering – Cumulative GPA 3.87

May 2020

- Emphasis: Controls of Robotics and Autonomous Systems

Capstone Project: Control of Swarm of Unmanned Underwater Vehicles for Wireless Communication

- Worked in the Taflab (Thermo and Fluidics Lab) at UC Berkeley. Headed wireless communication design to develop communication and tracking system for underwater laser based communications system. Used bidirectional lasers to send data while continuously tracking.
- Selected as one of top 6 teams out of over 90 to present at the capstone showcase

University of California, Santa Barbara

Bachelors of Science, Mechanical Engineering – Cumulative GPA 3.47

June 2016

- Relevant Coursework: Control System Design and Introduction to Robotics: Robot Dynamics and Control

Senior Capstone Project: Waveguide Manufacturing Study

- Project manager for a team of four mechanical engineers tasked with a manufacturing study of airplane radar waveguides with Orbitals ATK. Researched and tested new additive manufacturing processes for producing waveguides. Validated results through various tests at UCSB's materials research lab

Additional Classes

- RF Principles and Applications – UCSD Extension
- RF System Design for Wireless Communications – UCSD Extension
- Programming Fundamentals II – Palomar College

Fall 2017

Winter 2018

Fall 2017

WORK EXPERIENCE

CalAmp

Carlsbad, CA

Engineer I, Mechanical

Apr 2017– August 2019

- Designed plastic injection housing for electronics in a large scale production environment utilizing DFM principles
- Used FEA analysis tools to optimize design and injection molding parameters
- Generated parts, assemblies and drawings utilizing GD&T and ISO compliant revision control
- EMI shield can and cable harness design
- Oversaw contract manufacturers for tooling design and fabrication
- Optimized waterproof housings for 50+ feet deep applications
- Worked with electrical and RF engineers to integrate PCBA design with mechanical design
- Assisted with board layout and schematic design
- Validated housings and PCBAs against Mil, IEC and ISO standards
- Verified RF and thermal performance through active and passive GPS, Cellular, Bluetooth and Wifi testing
- Worked on PCBA bring-up and development of the automation testing environment (ATE)
- Coded in Python and Labview to set up automation testing for validation
- Re-flashed and debugged issues on 8 and 32 bit microprocessors
- Characterized and verified battery cells through individual and system level performance
- Oversaw and trained several mechanical engineering Interns

Sage Millimeter

Torrance, CA

Mechanical Engineer

Jan 2017– Feb 2017

- Designed microwave and millimeter wave components and sub-assemblies
- Created antennas, transducers, isolators, and switches along with other components to expand their product offerings
- Based on customer feedback, redesigned several products with smaller footprints while providing similar attenuation

Hologic Gen-Probe**San Diego, CA***Mechanical Engineering Intern**June 2015– Aug 2015*

- Analyzed throughput on the Tomcat automated molecular testing instrument to increase the efficiency
- Developed process enhancements and validated improved workflows with mechanical, electrical, and software engineers, resulting in over 10% reduction in overall cycle time
- Produced 3D printed parts to determine feasibility of design changes allowing the machine to use competitors vials

Nusil (Formerly Applied Silicone)**Santa Paula, CA***Mechanical Engineering Intern**June 2014 - Sept 2014*

- Designed and manufactured automated medical grade silicone processing machines
- Created a pneumatic removable fixture for a six axis robot to hold and power attachments for improved versatility
- Worked to help development processes for more efficient and even silicon distribution and curing across the molds
- Designed, analyzed and built a chemical fume hood with optimal airflow for less cost than those commercially available

University of California Santa Barbara**Santa Barbara, CA***Undergraduate Teaching Assistant**Mar 2014 – June 2016*

- Served as a teaching assistant for ME10 – Engineering Graphics: Sketching, CAD & Conceptual Design
- Subject matter expert in Solidworks; taught fellow students and graded papers on GD&T and other design principles

ADDITIONAL SKILLS, ACTIVITIES, & INDEPENDENT ENDEAVORS

- Deep understand of modern and classical control methodologies: Model-Predictive Control (MPC), Optimal Control (LQR/ LQG) and PID Control
- Knowledgeable in state estimation techniques: Kaman Filter, EKF, UKF, and Particle Filter
- Experienced user of Solidworks, Labview, MoldFlow, Draftsight, Onshape, Fusion 360, Pads, OrCAD, KiCad, LT Spice, Omnify, Visio, Excel and Word
- Proficient in Java, Matlab, C, C++, and Python languages
- Engineer in Training (EIT) Certified
- ASME Member
- Self taught welding and motor cycle repair; worked as vintage motorcycle mechanic
- Solo backpacked through 14+ countries