Zachary Yun

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EDUCATION

University of California, Berkeley
PH.D. MECHANICAL ENGINEERING   GPA: 3.95 | May 2023
M.S. MECHANICAL ENGINEERING   May 2019
California Polytechnic State University, San Luis Obispo
B.S. MECHANICAL ENGINEERING, MANUFACTURING CONCENTRATION, CUM LAUDE   GPA: 3.69 | Mar 2015

WORK EXPERIENCE

UNIVERSITY OF CALIFORNIA, BERKELEY | GRADUATE STUDENT RESEARCHER,
MULTIPHYSICS SIMULATION AND OPTIMIZATION LAB (MSOL)   Berkeley, CA | Aug 2017 – Dec 2022

- Developed multiphysics simulation tool for optimization of electric field-aided additive manufacturing processes used in experiments at the Materials Engineering Division of Lawrence Livermore National Lab
- Applied varied modeling techniques independently and in a team setting to simulate physical systems related to wide-ranging topics including additive manufacturing, epidemics, and wildfires
- Mentored junior graduate and undergraduate students within MSOL and the Department of Mechanical Engineering

LAWRENCE LIVERMORE NATIONAL LAB | GRADUATE STUDENT INTERN,
MATERIALS ENGINEERING DIVISION   Livermore, CA | May 2019 - Aug 2019

- Investigated particle tracking methods for *in-situ* observation of nanoparticles in an additive manufacturing process
- Constructed experimental setup for 3D particle tracking of fluorescent nanoparticles undergoing deposition
- Verified setup for 2D observation, prepared system for further verification with 3D testing

HAAS AUTOMATION | MANUFACTURING ENGINEER II   Oxnard, CA | Jun 2015 - Jun 2017

- Designed and manufactured custom tooling to support production processes and test prototype products in-house
- Coordinated between assembly, design, and machine shop teams to improve part design and production processes
- Improved and maintained robot cell programming and tooling and led robot cell integration projects to increase part production

APPLE | IPOD/IPHONE MANUFACTURING DESIGN INTERN   Cupertino, CA | Jun 2014 - Dec 2014

- Developed next-generation machining and polishing processes for production of devices
- Traveled to vendors around the country to perform experiments in order to qualify new processes
- Used 3D metrology equipment to analyze surface topology of test parts for process qualification

POLYSAT | MANUFACTURING LEAD, EXOCUBE PROJECT   San Luis Obispo, CA | May 2013 - Mar 2015

- Machined custom satellite flight hardware on CNC machines at Cal Poly campus
- Instructed team members in CNC machine use, proper shop practices, and Design for Manufacturing principles
- Tested (vibration and thermal vacuum) satellite flight model configuration to meet NASA flight specifications

SKILLS

Software: Python, Matlab, Julia, SolidWorks, HSMWorks, MasterCam, Creo, NX, JMP, Wordpress, Google Apps Script
Machinery/Hardware: CNC machining (Haas), Manual machining, MIG Welding, Robot Programming - Motoman and Fanuc

INVOLVEMENT

PolySat Program   CubeSat Program
American Society of Mechanical Engineers   Cal Poly Space Systems
Tau Beta Pi Engineering Honor Society   Pi Tau Sigma Honor Society
Boy Scouts of America – Eagle Scout Rank   SEED Elementary School Outreach (BERC)

Interests: hiking, camping, backpacking, fly-fishing, swimming, surfing, skiing, climbing, softball, reading, photography