JUSTIN THOMAS SELF

www.JustinSelf.com ⋆ 805-635-4290 ⋆ jselfaerospace@gmail.com ⋆ LinkedIn: @justintself ⋆ U.S. Citizen

OBJECTIVE

To obtain an entry-level position where I can add value to your engineering team through applying what I've learned and practiced through my undergrad and master's degree courses and research work. I love performing research, writing technical papers, and contributing toward a significant mission. I would be a great fit for a position requiring continual learning through research and developing innovative solutions to challenging problems. I'm looking for opportunities to grow personally, professionally, and to actively and energetically contribute to my team's success.

EDUCATION

Master of Science in Aerospace Engineering Expected: June 2025
California Polytechnic State University, San Luis Obispo, CA
Current Cal Poly GPA: 4.000

Bachelor of Science in Aerospace Engineering, *Summa cum laude* May 2021 - June 2024
California Polytechnic State University, San Luis Obispo, CA
GPA: 3.905; *Outstanding Scholar and Researcher (2022)*

Associate of Science in Physics, *High Honors* August 2018 - May 2021
Cuesta Community College, San Luis Obispo, CA
Engineering Student of the year (2021)
Physics Student of the year (2021)

Associate of Science in Mathematics, *High Honors* August 2018 - May 2021
Cuesta Community College, San Luis Obispo, CA;

RELATED COURSEWORK

Advanced Orbital Mechanics; Orbital Mechanics I and II; Spacecraft Attitude, Dyn. and Cntrl; Space Environments I and II; Reentry Aerodynamics; Spacecraft Electrical Systems; Design and Analysis of Experiments; Spacecraft Propulsion Systems; Sensors, Actuators, and Ctrl.; Advanced Methods in Applied Mathematics; Numerical Analysis; Materials Characterization

PUBLICATIONS

Self, Justin and Abercromby, Kira. *Investigation into Silicone-Silicate Conversion Mechanism and Atomic Oxygen Fluence Threshold in Low Earth Orbit Environment* **2025 AAS/AIAA Spaceflight Mechanics Meeting, Lihue, HI.**

Hiremath, Nandeesh, Justin Self, and Nathan Eller. *System Architecture for De-orbiting Spacecrafts as a Platform for Experimental Aerodynamics Studies.* **2024 IEEE Aerospace Conference, Big Sky, MT.**

Hiremath, Nandeesh, and Justin Thomas Self. *Virtual Aperture Multispectral Imaging for Atmospheric Reentry Studies Using High-Altitude Reflective Arrays.* **102nd American Meteorological Society Annual Meeting. AMS, 2022.**

RESEARCH EXPERIENCE

Virtual Aperture Multispectral Imaging for Atmospheric Reentry Studies Using High Altitude Reflective Arrays — Lead Undergraduate Researcher (9/2021 - 9/2024)

· Developed framework for a system architecture for high-altitude aerial optics system that aims to capture IR signatures of hypersonic reentry objects.

· Responsible for collaboration, presentation, and technical communication with interdisciplinary research team and scientific community

NASA Community College Aerospace Scholars — Mechanical Engineer (8/2019 - 8/2020)

· Developed and organized mission concept proposal collaboratively with award-winning team.
· Presented mission concept proposal to NASA judges panel, taking first place in team division.

Clark College Aerospace Engineering Club — Team Lead (9/2017 - 6/2018)

· Designed, manufactured, and bench tested 3D printed models of passive roll stabilization system.
· Developed airframe components for the 2018 Clark College rocket for the Experimental Sounding Rocket Association (ESRA) 10,000 ft apogee collegiate rocketry competition.

WORK EXPERIENCE

Cal Poly Space Environments Laboratory (February 2024 - present)	**Student Test Engineer** Responsible for running "fee for service" tests for aerospace industry space environments and materials research. Comfortable with vacuum chamber laboratory equipment including thermodynamic characterization and testing, CCP plasma asher used for atomic oxygen attack ground simulation, and UV radiation for synergistic effects studies.
Cal Poly Spacecraft Design Sequence (September 2024 - present)	**Student Assistant Teacher** Responsible for grading and assisting students with technical design and mission concept solutions for the Spacecraft Design capstone sequence for fourth-year students.
California Polytechnic State University (December 2024 - present)	**AERO 355 Lab Instructor** Responsible for teaching AERO 355 (Space Environments I) laboratory section for third-year aerospace engineering students. Duties include facilitating student lab experiments using vacuum chambers, thermodynamic systems, contamination, and atomic oxygen exposure.
Kainos Global 501(c)(3) (March 2023 - present)	**Founder** Responsible for leadership of nonprofit organization focuses on humanitarian assistance in Kenya, Africa.
Kainos Creative Solutions (April 2019 - March 2023)	**Owner, lead designer** Established freelance graphic design, web design, and content writing company that serves clients nationwide.
Kainos Tutoring, LLC (April 2019 - March 2023)	**Owner, lead tutor** Spearheaded private tutoring company for math and science content. Grew company and held several contracted employees.

TOOLS AND SKILLS

MATLAB	Simulink	SolidWorks	SEM, FTIR, TGA	Optical Microscopy
ImageJ	LaTeX	JMP Pro	Arduino IDE	Laboratory Testing

PROJECTS

AAS/AIAA Spaceflight Mechanics Meeting Paper Presentation	January 2025
IEEE Aerospace Conference Paper Presentation	March 2024
STEM-NET SoCalGas Student Fellowship Research Program	October 2022
LSAMP (Cal Poly STEM organization) Summer Research Fellowship	June-August 2022
Research presentation — AIAA Student Paper Conference, Merced, CA.	March 2022