

(571) 926-0350

# Gabriel P. Paier

gpaier@ucsb.edu

[www.linkedin.com/in/gabriel-paier](https://www.linkedin.com/in/gabriel-paier) | <https://gabepaier.com/>

## EDUCATION

University of California, Santa Barbara  
Bachelor of Science, Mechanical Engineering

Graduation: June 2025  
Cumulative GPA: 3.52

## WORK EXPERIENCE

**Caterpillar-Solar Turbines**, Mechanical Engineering Intern, Engine Overhaul Supply Chain Group June 2024-Present

- Worked hands-on with advanced mid-size industrial gas turbines ranging in size (1,400-55,000 hp), responding rapidly to quality issues from production and supporting engineering activities to meet tight manufacturing deadlines
- Created and implemented a quality improvement plan and manufacturing qualification (PPAP), resolving nonconformance issues at a supplier, increasing yield on a turbine sliding ring, and achieving cost savings of \$1.6M
- Conducted multiple key supplier visits to strengthen relationships and drive collaborative quality improvement initiatives
- Consolidated, processed, and manipulated repair yield data in Excel from six suppliers to categorize defect causal codes, identifying trends, outliers, and root causes, and enabling data-driven recommendations for future repair programs
- Led a rapid improvement project addressing handling damage on turbine blades, saving \$494,000
- Collaborated with design engineering to modify prints, improving manufacturability and boosting supplier efficiency

**RedWire Space**, Mechanical Engineering Intern, Lunar Gateway & ISS Solar Panels June 2023-June 2024

- Utilized SolidWorks to design, prototype, and implement assemblies, structures, mechanisms, PCBs, and weldments meeting requirements for the Power and Propulsion Element of the Lunar Gateway's deployable solar arrays system
- Applied GD&T best practices to avoid over-tolerancing, optimizing manufacturability and minimizing production costs
- Designed and developed circuit board schematics using Autodesk Eagle, built and quality-checked PCBs, and implemented them into a 3D-printed rapid prototype for solar array validation
- Conducted structural and safety factor analyses to design wing transport platform and boom holder assemblies for Lunar Gateway wings while ensuring compliance with safety codes and load-bearing standards
- Constructed large deployment test structures using FARO Vantage Laser Tracker, ensuring their perpendicularity to gravitational force within 0.0010 inch to mitigate gravitational effects during panel test deployment
- Performed detailed redlining of engineering drawings to identify and resolve design discrepancies, ensuring compliance with NASA standards and manufacturability requirements

## PROJECT EXPERIENCE

**Senior Capstone**, National Oceanic and Atmospheric Administration & UC Santa Barbara September 2024-June 2025

- Engineered an unprecedented passive autonomous environmental DNA sampler for 30-day deployment off the Channel Islands
- Achieved First Place Excellence Award for ranking highest among 100 senior Mechanical Engineering students

**Aerodynamics Team**, Formula SAE Team Gaucho Racing, UC Santa Barbara April 2023-June 2024

- Hands-on experience with composites manufacturing including vacuum bagging, hot wire foam cutting using laser cut templates, complex laying of fiberglass for lightness and strength, and finishing parts

**Mechanical Engineering Machine Shop**, UC Santa Barbara September 2021-December 2021

- Fabricated a compressed air motor from engineering drawings with complex industrial machinery, achieving tolerances within 0.0010" and 8,000 RPM

## LEADERSHIP EXPERIENCE

**New Venture Competition** UC Santa Barbara Technology Management September 2024-June 2025

- Principal entrepreneur developing a market-tested business model and prototype of a novel (patent pending) camping stove optimized for high-altitude conditions
- Earned a Technology Management Professional Certificate to leverage strategic business fundamentals

**Volunteer Staff**, UC Santa Barbara Department of Recreation September 2021-June 2025

- Led and organized 7-day long freshman wilderness orientation trips, coordinating and collaborating with peer leaders and requiring WFA certification, extensive leadership, communication skills, and risk and crisis mitigation knowledge

## SKILLS

- Proficient in SolidWorks, ANSYS, CREO, MATLAB, Python, Machine Learning, and interpreting engineering drawings
- Production Part Approval Process (PPAP), First Article Inspection (FAI), Six Sigma, Lean Manufacturing, and LabVIEW
- Complete restoration of a vintage 1973 Datsun 240z, including engine rebuild, bodywork, paint, interior, and wiring
- Lifeguard CPR, WFA, NJ boater, PADI Open Water Scuba Certified, US Sailing Member and Certified Level 1 Instructor