

# SAM CASEBOLT

Graduate Student at UC San Diego

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I am a mechanical engineer with a curious nature that does not rely on memorizing formulas but enjoy exploring the math and physics behind the governing principles to look for alternative ways to attack problems. I enjoy writing scripts to automate everyday problems and evaluate large data sets. I am very passionate about research topics on differential geometry, relativistic mechanics, and solid mechanics, and eager to find opportunities to exercise my analytical side.

## EXPERIENCE

### ***PD Engineering Intern, Apple Inc. — January 2023 - September 2023***

Primarily worked on fastener drop survivability and stiffness optimization aided by FEA software (ANSYS).

### ***Undergrad Research Partner, University of California, Berkeley — January 2021 - December 2022***

Worked with *Professor Francisco Armero* in an exploration of relativistic elasticity.

## TECHNICAL SKILLS & SOFTWARES

Design: NX, SolidWorks, OnShape, & AutoCAD

Analysis: ANSYS, FEA, Fortran 90/90, & Matlab

Build: FDM 3D printing, Lathe, Mill Operation, English Wheel, Bead Roller, & Shrinker/Stretchers

## EDUCATION

### ***University of California, San Diego — Graduate Student, September 2023 - Present***

Faculty Advisor: J.S. Chen

### ***University of California, Berkeley — BSME, August 2020 - December 2022***

Studied additional engineering topics of interest, including on continuum mechanics, structural mechanics, computational mechanics, FEA, and Lagrangian dynamics.

### ***Ohlone College, Fremont, California — General Education & Transfer Requirements***

## NOTABLE UNDERGRADUATE DESIGN PROJECTS

### ***Collapsible Sofa, Product Development — Summer 2022***

Lead a team of five engineering students through the design and prototyping of a collapsible sofa.

### ***Self-Playing Flute, Mechatronics Design — Spring 2022***

Built a self playing flute capable of performing nine distinctive notes, along with a preprogrammed song. Managed a team of three engineering students and was principally responsible for the primary mechanism, electronics, and the assembly.

## DESIGN PORTFOLIO

***casebolt.net***

## AWARDS AND HONORS

***Outstanding Student in Physics, Ohlone College — 2018-2019***

***Phi Theta Kappa Honor Society — 2019***