Stanford

Steven Salah-Eddine

Masters Student in Aeronautics and Astronautics, admitted Autumn 2022

Resume available Online

Bio

BIO

Steven Salah-Eddine is a Master of Science student in the department of Aeronautics and Astronautics at Stanford University. He received a Bachelor of Science degree in Mechanical Engineering from the University of California, Berkeley. Steven is a research assistant in the Structures and Composites Laboratory at Stanford University, where he works under the guidance of his principal investigator, Professor Fu-Kuo Chang.

Steven is engaged in cutting-edge projects involving the development and optimization of multifunctional energy storage composite (MESC). His primary focus is on creating a scalable, integrable structural battery with built-in sensing capabilities. This innovative MESC battery is designed to replace single-purpose structural members, potentially reducing vehicle weight and increasing energy capacity for enhanced range performance. Such advancements are particularly crucial in developing robust Electric Vertical Take-Off and Landing (EVTOL) vehicle structures, where traditional EV systems often rely on redundant support systems to protect battery cells from heat, impact, and moisture.

Steven's research project targets the EVTOL market, exploring the application of MESC in commercial EVTOL body structures and determining the energy capacity needed for standard flights. His second initiative involves optimizing MESC specifications for a previously fabricated I-Beam, using MATLAB programing language for intricate design calculations and failure mode analysis. Beyond the lab, Steven's experience as an iPhone Product Design Engineering Intern at Apple has honed his skills in product design, adding to his expertise in design for manufacturability, finite element analysis, and materials science.

Steven balances his life with personal interests that include golfing, weight training, and running during his free time.

HONORS AND AWARDS

- Made at Berkeley Showcase Book - Best Visualization Design, University of California, Berkeley (05/26/21)
- Deans List - College of Engineering, University of California, Berkeley (12/23/20)
- Honor Society, Pi Tau Sigma Mechanical Engineering Honor Society (1/15/2021)
- Honor Society, Tau Beta Pi Engineering Honor Society (01/15/2021)

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

- Quantum CubeSat Mechanical Engineer, Space Technologies at Cal (2020 - 2022)
- Professional Development Officer, Tau Beta Pi Engineering Honor Society (2020 - 2022)

EDUCATION AND CERTIFICATIONS

- MS, Stanford University , Aeronautics and Astronautics (2024)

- BS, University of California, Berkeley , Mechanical Engineering (2022)

PERSONAL INTERESTS

Golfing, Weight Lifting, Soccer, Travel, and Reading

Research & Scholarship

PROJECTS

- Design of a Bio-Inspired Monopedal Jumping Robot - University of California, Berkeley (8/25/2021 - 12/23/2021)
- Robot Dynamics for Simulation and Control - University of California, Berkeley (4/20/2021 - 5/26/2021)
- Design of a Co-axial, Co-planar Rotor - University of California, Berkeley (7/13/2021 - 8/13/2021)

Professional

WORK EXPERIENCE

- Graduate Student Instructor - Physics 41: Mechanics - Stanford University (9/15/2022 - present)
- Research & Development Engineer - Perikinetics (3/28/2022 - 6/1/2022)