

CHRISTOPHER REHBERG

Graduate Research Assistant

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chris-rehberg

Orlando, FL

RELEVANT EXPERIENCE

Graduate Research Assistant

Structures and Materials Design Lab at UCF

May 2017 - Ongoing

- Researching the buckling response of a Collapsible Tubular Mast (CTM) shell in the linear elastic and viscoelastic regimes
- Designing and verifying changes to experimental equipment using SolidWorks
- Manufacturing and testing of carbon fiber epoxy composites using hand layoffs and vacuum methods
- Designing and verifying finite element simulations of the buckling response using Abaqus

Senior Design - Team Lead

Lockheed-Martin & University of Central Florida

Aug 2019 - May 2020

- Led an 8-member team in developing an autonomous drone capable of self-navigation in a GPS denied environment
- Implemented risk analysis mitigation and project management through FMEA and Gantt charts
- Selected and tested of flight controller, firmware, and optical flow sensor
- Oversaw all sourcing and purchasing requests and collaborated with UCF's aerospace department to obtain materials

Design, Build, Launch - Team Member

SEDS, UCF Chapter

Aug 2017 - May 2018

- Tasked with designing a dual-deployment parachute system for a model-rocket using an I class motor
- Designed, programmed, and assembled the system based on the Arduino Nano platform
- Engineered a safety first design through ground testing and redundancy checks built into the software

Aviation Design - Team Lead

AIAA, UCF Chapter

Aug 2016 - May 2018

- Led 5-member team to 2nd place in a model aircraft competition
- Managed development and manufacturing of aircraft design
- Determined aircraft design and aerodynamic characteristics
- Developed a wing to meet determined characteristics using SolidWorks, Xfoil, and XFLR5

PUBLICATIONS

Thesis

- C. D. Rehberg, "Ensuring positive definiteness in linear viscoelastic material functions based on prony series," *Honors Undergraduate Theses*, no. 749, 2020. [Online]. Available: <https://stars.library.ucf.edu/honorsthesis/749>.

EDUCATION

M.S. in Aerospace Engineering

University of Central Florida

Aug 2020 - May 2022

Thesis: Buckling Analysis of Single CTM Shell
UCF GPA: 3.67

B.S. in Aerospace Engineering

University of Central Florida

May 2020

Honors in Aerospace Engineering

Honors Undergraduate Thesis
UCF GPA: 3.56

B.S. in Aeronautics

Embry-Riddle Aeronautical University

May 2009

Minor: Air Traffic Management
ERAU GPA: 3.34

SKILLS

Python	■ ■ ■ ■ ■
MATLAB	■ ■ ■ ■ ■
Abaqus	■ ■ ■ ■ ■
SolidWorks	■ ■ ■ ■ ■
MS Office	■ ■ ■ ■ ■
Linux	■ ■ ■ ■ ■

Leadership	■ ■ ■ ■ ■
Teamwork	■ ■ ■ ■ ■
Adaptability	■ ■ ■ ■ ■
Communication	■ ■ ■ ■ ■

AWARDS

2021-22 FSGC Masters Fellowship

Burnett Honors College Research Scholarship

LICENSES

Private Pilot: Airplane Single Engine Land

Instrument Add-On