# CHRISTOPHER REHBERG

#### **Graduate Research Assistant**

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in 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 layups 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

- **a** Aug 2019 May 2020
- Led an 8-member team in developing an autonomous drone capable of selfnavigation 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

- **a** 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 The*ses, no. 749, 2020. [Online]. Available: https://stars.library.ucf.edu/ honorstheses/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

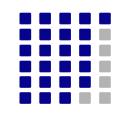
**ERAU GPA**: 3.34

# **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