

Brandon Ridgway

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PROJECTS

Low Aspect-Ratio Aircraft Design (Graduate Mock Proposal)

- Examined existing research proposals related to Low Aspect-Ratio aircraft
- Early studies involved a closer examination of the unique aspects of low aspect-ratio flight
- Considered various design changes, as well as additional features which could be fitted into a wing for the purpose of improving flight conditions in various flight regimes
- Presented a proposal for hypothetical research that could be done regarding the various selected design adjustments with an end-goal of finding a more holistically effective low aspect-ratio aircraft design

Mars Station Simulation (Discrete Systems Simulation)

- Simulated the sustainability of a fueling base on the surface of Mars within the Simio program
- Appropriated existing model from prior group and then upgraded to include various features such as water harvesting in the soil, waste disposal, rover charging, etc.
- Led a multi-disciplinary group in the completion of various tasks over the course of multiple months

Unique Foam UAV (Senior Design Project)

- Ideated a unique UAV design in order to match challenging design requirements
- Chosen design involved a segmented wing, separated into three sections and cut from tip to tip, which could then be quickly assembled in the field
- Personal accomplishments include presenting the segmented-wing concept, studying and relaying the aerodynamics to other group members, and creating a CFD analysis on a 3D model of the UAV
- Project was constructed, tested, and later flown at a gathering of peers

3D Camera Model (Engineering Design)

- Modeled a rotational camera with multiple degrees of freedom within SolidWorks
- Design was then incorporated into a full drone model, combined with sections created by team members

SKILLS

- Programming : MATLAB
- 3D Modeling : SolidWorks
- CFD : Air flow in ANSYS Fluent, Star-CCM+
- Simulations : MATLAB, Simulink, STK, LabVIEW

EDUCATION

Master of Science : Aerospace Engineering May 2019
University of Central Florida

- Graduated with a 3.54 GPA
- Coursework in Aircraft / Satellite Simulations, Astrodynamics and System Controls

Certificate : Systems Engineering Dec 2018
University of Central Florida

- Set of four courses covering basics of Systems Engineering

Bachelor of Science : Aerospace Engineering Dec 2016
University of Central Florida

Post-Graduation

- Working towards obtaining PCEP/PCAP Certifications in Python programming

WORK HISTORY

Team Assistant Sep 2019 – Nov 2021
Bowling Mechanic Nov 2021 – Present

Boardwalk Bowl Entertainment Center

Book Seller – Online May 2018 – Feb 2019

Barnes & Noble College UCF