Vincent Spada

(814) 823-3614 - vinspada@hotmail.com

Education

Bachelor of Science, **Aerospace Engineering** — Expected Dec 2023
The University of Texas at Austin — GPA: 3.99/4.00

Work Experience

Control and Learning for Autonomous Robotics - Undergrad Research Assistant - 08/2023-current

- Supporting the study of efficient machine learning based control of a quadruped by studying low-level controls
- Gaining experince in robotic development in topics like C++, ROS/Gazebo, and Ubuntu/Linux

Flight Dynamics Branch (NASA intern) - Design/Fabrication - 05/2023-07/2023

- Designed and fabricated a modular test apparatus/model for distributed electric propulsion and propulsion-airframe interaction experiments
- **Design:** detailed system-level virtual prototype, multiple custom components **Analysis:** loads solver, low-fidelity aero simulation, mid-fidelity FEA **Fabrication:** 3D printed prototypes, operated CNC equipment, built assemblies, generated machining documents, diverse materials/processes
- Enabled rapid development taking rough CAD ideas to ~90% model completion in 30 work days

Nondestructive Evaluation Sciences Branch (NASA intern) - Composites Imaging/Data Analysis - 06/2022-08/2022

- Researched the viability of NDI techniques for use on damaged composite wind tunnel blades
- Operated geometric scanning, ultrasonic testing, thermography, and microwave imaging systems; observed x-ray computed tomography
- Analyzed data using python; developed a Principle Component Analysis tool for processing thermography images deployed on a PyQT GUI

Mechanical Systems Branch (NASA intern)- Manufacturing/Materials - 01/2021-07/2021

- Supported manufacturing and recursive design of flight-like, all-composite prototype of MSR-EEV resulting in a successful internal readiness review
- Worked with diverse teams on materials and processing of complex geometry, carbon fiber parts
- Tested composite coupons to augment team decision-making

Student Projects

Texas Drone Estimation Laboratory (NASA USRC) - Hardware/Simulation - 01/2023-current

- Constructing and simulating quadcopter prototypes to research position estimation techniques
- Designing quadcopters with COTS hardware and applying C++, ROS, and Gazebo software

Unmanned Aerial Vehicles Austin - Structures Lead - 01/2020-05/2021

- Led design of aerostructures and a composites manufacturing plan for a competition aircraft
- Built a sizing solver integrated with aero simulation and a mission profile for fixed-wing airframes

NASA Micro-g NExT - Deliverables/Fabrication Lead - 09/2019-09/2020

- Invented a dust tolerant astronaut hand tool for the Artemis missions with 5 other students
- Led recursive prototyping remotely, authored deliverables, acted as test director at the JSC NBL