PEDRO G. LEITE

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EDUCATION

University of Illinois Urbana-Champaign August 2024
Master of Science in Aerospace Engineering Cumulative GPA: 3.83/4.00

- Relevant Coursework: Stochastic/Robust Control, Multi-Agent Systems, Rocket Propulsion, Statistics and Probability, Finite Element Analysis

University of Illinois Urbana-Champaign May 2023
Bachelor of Science in Aerospace Engineering Cumulative GPA: 3.33/4.00

- Relevant Coursework: Numerical Methods, Aircraft Propulsion, Aircraft Flight Mechanics, Orbital Mechanics, Systems Design, Applied Aerospace Structures, Dynamical Systems

PROJECTS

Multi-Agent Systems (Class) September 2023 – December 2023

- Designed a novel method of autonomously detecting and deorbiting debris in Medium and High Earth Orbit using linear consensus protocol through ground relay communications between deorbiting agents using Julia.

Classic Control Systems (Class) January 2023 – May 2023

- Designed and implemented a LQR controller and observer system to stabilize a reaction wheel inverted pendulum using MATLAB's Simulink's Real-Time Desktop.

MARS Surveyor and Communications Orbiters for Positioning and Exploration Satellite January 2023 – May 2023
Communications Subsystem Lead

- Sized antennas and electrical components of both space and ground radio for a Mars satellite mission to provide GPS, communication relay, and mineral mapping of the planet's surface.
- Presented the preliminary design review and won the class competition at the end of the semester.

AIAA – Liquid Rocket Initiative January 2022 – May 2023
Test Stand Structures Lead and Programmer

- Organized timeline for timely design and manufacturing of liquid-bipropellant rocket test stand.
- Applied Object Oriented Programming in Python to develop a script that is used to size thrust chamber assemblies.
- Researched ablative materials to ensure thermal integrity of rocket engine assembly.
- Communicated with Purdue University's Maurice J. Zucrow Laboratories to facilitate design reviews.

Aerospace Control Systems (Class) April 2022 – May 2022

- Implemented an observer-based linear state feedback control design to stabilize a 4-rotor drone through a hoop circuit as quickly as possible, achieved 1st place in the class competition, performing 50% faster than the 2nd place.

Computer Aided Design (CAD) (Class) January 2020 - May 2020

- Designed a 1:1 detailed scale model of the Russian rocket Soyuz-FG in Siemens NX.

PROFESSIONAL EXPERIENCE

University of Illinois, Department of Aerospace Engineering August 2023 – May 2024
Teaching Assistant *Champaign, IL*

- Taught section of 18 students and held office hours for over 140 students for the course: Autonomous Systems Laboratory.
- Rated 4.75/5.00 on teaching effectiveness by the students.

Azul Brazilian Airlines June 2020 –August 2020
Team's Monitor Evaluator/Data Analysis Group Intern *São Paulo, Brazil*

- Analyzed and manipulated an Excel spreadsheet together with 5 team members to identify unsatisfactory sales.
- Evaluated teammates' ideas and proposals to optimize project development.
- Formulated a data identification algorithm that was put in use by the company.

LEADERSHIP

- Engineering Council Dean's Student Advisory Committee Member — May 2022 – May 2023
- Alpha Delta Phi Interfraternity Council Chair/Re-founder — January 2022 – May 2023
- Engineering Council Awards Chair — May 2020 – May 2021
- Engineering Council Freshman Leadership Chair — September 2019 – May 2020

SKILLS

- Software: Python, MATLAB, LaTeX, GitHub, Siemens NX, Abaqus, Julia, HTML, Microsoft Suite
- Spoken Languages: Portuguese (Native), English (Fluent), Spanish (Fluent)