Victor Petitgenet

4599 Mount Paran Pkwy, Atlanta GA 30327 • vpetitgenet@gatech.edu • 678-654-0654 • American & French Citizen

EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY **Atlanta, GA**

M.S. in Aerospace Engineering *Fall 2019 - Spring 2021 (Anticipated Graduation)*

- Graduate Research Assistant at the Aerospace Systems Design Lab (ASDL)
- GPA: 4.0/4.0

B.S. in Aerospace Engineering (Class of 2019) *Fall 2015 - Spring 2019*

- GPA: 3.83/4.0 (AE Honors Program, Dean's List)

PROJECTS & RESEARCH

Actuating RCS Jets in a Coupled CFD-RBD Simulation *September 2020 - Present*

Graduate Research Assistant **Atlanta, GA**

- Extending the capabilities of a CFD-RBD simulation environment to provision for simulating actuation of RCS nozzles for planetary entry vehicles in a time-accurate manner
- Running CFD (FUN3D) to test different actuation schemes, post-processing of results using Tecplot

NASA MSFC - Nuclear Thermal Propulsion (NTP) Design Space Exploration *Fall 2019 - Fall 2020*

ASDL - Graduate Research Assistant **Atlanta, GA**

- Developed and implemented a novel methodology for the coupled design space exploration of NTP systems in tandem with Georgia Tech's Nuclear Engineering Department
- Paper published to AIAA P&E (August 2020), 1st author

Yellow Jacket Space Program *September 2017 - Spring 2019*

Systems Engineering Team Member **Atlanta, GA**

- Student led initiative to launch liquid fueled rocket carrying 10kg payload above 100km
- Created aerodynamic heating simulation allowing for 1st order skin temp estimation
- Performed uncertainty propagation to quantify the uncertainty of the rocket's position in flight
- Developed mission and vehicle requirements

EXPERIENCE

Momentus - Systems Engineering *February 2021 - Present*

Intern **Remote**

- Decomposing key product requirements to component level requirements through analysis and calculations for Momentus space vehicles
- Upgrading and optimizing RCS simulation tools used to calculate on-orbit propellant usage

Aerion Supersonic - Systems Engineering *May 2020 - August 2020*

Intern **Remote**

- Created and managed requirements for the AS2 aircraft
- Developed an ETOPS analysis code for the AS2 aircraft

SKILLS

Coursework

Bachelor's Degree: Dynamics, Vibrations, Thermodynamics & Fluids, Aerodynamics, Vehicle Performance, Jet/Rocket Propulsion, Structures, Aeroelasticity, FEA, Electric Aircraft & eVTOL, Capstone Design Project - Interplanetary CubeSat Mission Design

Master's Degree: Advanced Design Methods, Aircraft Design, Aerospace Systems Engineering, Orbital Mechanics, Robotics & Autonomy

Programming Languages: MATLAB, Python, Java, HTML, CSS, Julia

Software: SolidWorks, Simulink, CATIA, iSight, XFoil, AVL, ANSYS, Abaqus, FLOPS, Microsoft Office Suite, OpenVSP, Jama, STK, JMP, FUN3D, Tecplot

Spoken Languages: English (fluent), French (fluent), Spanish (conversational)

Pilot Training: Private Pilot License in progress