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 - Present*

- 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

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

Airbus - "Single Thread" Component Design Grand Challenge *Winter 2015 - Summer 2017*

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

- Leveraged software solutions to improve information flow and reduce design cycle time and cost in the detailed design phase
- Demonstrated weight & time savings in design cycle for commercial aircraft wing ribs, paper published to AIAA SciTech (January 2017), contributing 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

NASA Langley - Trajectory Simulation with Coupled CFD Aerodynamics *September 2020 - Present*

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

- Creating a coupled Rigid Body Dynamics – Computational Fluid Dynamics simulation for the analysis of planetary entry vehicles
- Addressing simulation challenges of activating/deactivating RCS thrusters used to control vehicle during entry

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

Systems Engineering Intern **Reno, NV/Online**

- Developed a long-term roadmap for the implementation of MBSE at Aerion
- 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, SysML

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

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

Pilot Training: Private Pilot License in progress