



Multidisciplinary Aeronautics Research Team Initiative

**At
NASA**



Armstrong Flight Research Center

Before you apply, read all of this page to make sure this is what you want to do. It is NOT a typical summer internship. If you think you have what it takes and would enjoy this type of challenge, apply on or before February 20, 2017.

To apply, visit <http://martiapp.com>:

About MARTI at Armstrong Flight Research Center

Multidisciplinary Aeronautics Research Team Initiative (MARTI) at NASA Armstrong Flight Research Center offers an intense, integrated, multidisciplinary opportunity for students with career aspirations in the national aeronautics or aerospace enterprise. The academy helps prepare aspiring young professionals for employment by providing opportunities for direct science and engineering experience with an awareness of the complex managerial, political, financial, social, and human issues faced by current and future aerospace programs. The Aeronautics Academy students receive training in integrated systems research, project management, leadership, teamwork, and multidisciplinary collaboration. Students work as a team on a multifaceted problem as guided by professional scientists and engineers. In addition to students' exposure to NASA, they also gain broader exposure to aeronautics through visits to industry and other research facilities.

The academy experience includes a series of subject matter expert lectures and/or short courses, lunches with senior leaders, and focused discussions with program and project engineers. Participants must be enrolled in Aeronautical, Aerospace Engineering, or related disciplines, including Mechanical, Electrical, and Computer Engineering, Applied Mathematics, Applied Physics, or Computer Science. This is an intense, rigorous program for the entire team. It is not the typical 9 to 5 research experience where individuals work one on one with a mentor.

At the completion of the project, students present their findings orally to NASA leaders at center forums and via video conferencing and/or in person to NASA Headquarters or other NASA centers. During the course of the academy, students may have opportunities to visit other NASA, industry or federal laboratories. A NASA Technical report or professional conference technical paper may be published from the project.

As part of the academy, students collaborate with Armstrong engineers, attend lectures, participate in leadership discussions, and document their research with oral and written communication. Students will experience a real-world integrated systems research environment. Students will communicate regularly with NASA engineers and managers, will document their work with both oral and written presentations, and if funds allow, may visit other NASA or other federal facilities. Students will visit many research facilities located on or near Armstrong Research Center.

2017 MARTI at Armstrong Flight Research Center
Project Description
POC: Oscar Murillo

Flight Validation of Green Aviation Concepts for Fuel Efficiency Improvements (PRANDTL-D)

Objective: MARTI students will implement and fly an experiment that involved a small-scale remotely piloted glider experiment. Instrumentation will be flown to gather flight data. The experiment will produce data of interest to the agency. In particular, this concept has the potential to satisfy green aviation goals in the improvement of fuel efficiency, lightweight structures, and vehicle maintainability. Long term implications offer 10-15% fuel efficiency improvement in cargo and passenger service. The instrumentation will be built-up and installed by the students with the help of researchers and engineers. The students will participate in a flight operation to gather flight research data. The data will be downloaded and analyzed by the students. The students will then write a final report on their findings from the data.



Desired Attributes of Applicants:

- Demonstrated ability to work successfully as part of a team.
- Leadership qualities and a desire to pursue a career in aeronautics.
- College/Academic Level at time of Internship or Fellowship: 3rd year undergraduate (Junior) through second year graduate student (Community College students in a 2+2 transfer program may apply if they will have completed the first two years and are enrolling in the third year prior to August 2017)
- Academic Disciplines/Majors – Computer Engineering or Computer Science; Engineering majors Aerospace/Aeronautical/Mechanical/Electrical/Instrumentation/ and Systems Engineering. Related majors considered, e.g. Mechatronics, Applied Physics or Mathematics.

Eligibility:

GPA 3.2 minimum

U.S. citizenship required

Minimum age - 18

Undergraduate or graduate students

Desire to pursue aeronautics or related disciplines as a career

Applications:

Please visit <http://www.martiapp.com> to complete an application. All applicable information is posted on the website.

Dates for AFRC MARTI Program: 10 weeks, early June through early August. Consideration for students academic schedule will be made if they conflict with the proposed start date.

PROGRAM NOTE – NASA AFRC does not provide housing for MARTI students, as listed on the [martiapp.com](http://www.martiapp.com) website.