NYU TANDON TEAM SOARS IN SAE AERO DESIGN WEST COMPETITION

Students Design and Fly Light, Efficient Aircraft in International Contest

BROOKLYN, New York – At the SAE Aero Design West Competition, which drew dozens of teams from around the world to Van Nuys, California, in early April, a remote-controlled aircraft designed and built by a team from the NYU Tandon School of Engineering placed third in the nation and tenth in the world.

Part of the Society of Automotive Engineers (SAE) International’s Collegiate Design Series (CDS), the Aero competition is a real-world challenge designed to mimic a typical aircraft development process and expose participants to conceptual design, manufacturing, and system integration and testing.

NYU Tandon established a long history in the SAE Aero event, competing almost every year for more than a decade. This year’s team, WingingIt, competed in the Regular Class category, which called upon students to maximize passenger and cargo loads while minimizing power consumption. All competing crafts were fixed-wing models weighing less than 55 pounds including payload. Much like a commercial airliner, the WingingIt plane featured separate compartments to carry “passengers” (tennis balls) and “luggage” (metal plates) in a tight fuselage. Manufactured mainly from foam and wood, the NYU Tandon craft weighs 38 pounds fully loaded and has a wingspan of 12 feet, making it among the largest at the April competition.

Performance at the event was determined by the successful completion of flights while carrying as much payload as possible, and WingingIt, piloted by competition volunteer Matt Carroll, completed five flights, with 18 “passengers” and a total of 37 pounds of payload carried across all rounds — the best Regular Class record achieved by an NYU team to date.
With many of the planes in the competition either crashing or failing even to take off, designing a craft that can become airborne is a major priority. Because the team had efficiently completed manufacturing by the end of February 2018, it was one of the few to test-fly its aircraft prior to the competition, allowing time for modifications.

“WingingIt demonstrates the power of collaborative effort and an iterative approach to design,” said Industry Professor of Mechanical and Aerospace Engineering Joseph Borowiec, who served as advisor. “Despite having to rebuild their fuselage entirely in the space of two weeks, they performed admirably at the competition. In addition to their teamwork, they demonstrated strong technical knowledge and tactical skill, and I was proud to have them representing Tandon on this important international stage.”

The team is comprised of mechanical engineering students, each of them a senior; they hope that after they graduate, future SAE Aero Design teams will be inspired by their plane, which will be a part of NYU Tandon’s Capstone Competition Showcase on May 7, 2018, and will subsequently be placed on display at the school’s MakerSpace.

Team members include Luciana Jaalouk (captain; lead manufacturing engineer), Marc Rozman (electronics engineer), Juhi Singh (structural design and programming engineer), Shivam Suleria (aerodynamics and computational fluid dynamics engineer), Justin Talevski (testing and product reliability engineer), and Eduardo Hernandez Vivar (controls and vibration stability engineer). Follow the team on Facebook and Instagram @wingingitnyu.

**About the New York University Tandon School of Engineering**

*The NYU Tandon School of Engineering dates to 1854, the founding date for both the New York University School of Civil Engineering and Architecture and the Brooklyn Collegiate and Polytechnic Institute (widely known as Brooklyn Poly). A January 2014 merger created a comprehensive school of education and research in engineering and applied sciences, rooted in a tradition of invention and entrepreneurship and dedicated to furthering technology in service to society. In addition to its main location in Brooklyn, NYU Tandon collaborates with other schools within NYU, among the country’s foremost private research universities, and is closely connected to engineering programs at NYU Abu Dhabi and NYU Shanghai. It operates Future Labs focused on start-up businesses in downtown Manhattan and Brooklyn and an award-winning online graduate program. For more information, visit [http://engineering.nyu.edu](http://engineering.nyu.edu).*

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