



Press Release

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The Vertical Flight Society Announces the Winners of the Inaugural Design-Build-Vertical-Flight Student Competition

University of Michigan Wins Top Honors

Fairfax, Virginia — The Vertical Flight Society today announces the winners of its inaugural Design-Build-Vertical Flight (DBVF) Competition. The **University of Michigan took first place** with a prize of \$2,000. The team from the **University of Maryland took second place** and the **Ohio State University took third place**; the teams will be awarded cash prizes of \$1,000 and \$500, respectively.

The remote-control electric-powered vertical take-off and landing (eVTOL) DBVF competition seeks to encourage interest in unmanned aircraft technology, and small air vehicle design and fabrication. The competition is designed to develop hands-on skills and familiarization with eVTOL and advanced air mobility (AAM) technology at the university student level, helping to prepare the next generation of engineers and leaders to push the limits of this exciting technology into the future.

Although the ongoing COVID-19 pandemic forced the cancelation of the fly-off portion of the competition, each team submitted a final technical report and made a virtual presentation of their design and findings to a panel of judges on April 15-16.

There were a total of seven academic teams that submitted entries in this year's competition. The 2020-2021 request for proposal (RFP) challenged the teams to build a general aircraft, with requirements restricted to the unmanned aircraft system (UAS) Group 1, which limited the maximum take-off weight (MTOW) to no more than 20 lb (9.1 kg). The RFP and other information is available at www.vtol.org/fly.

The winning teams are as follows:

<u>Place</u>	<u>University</u>	<u>Location</u>	<u>Team</u>
1 st	University of Michigan	Ann Arbor, Michigan, USA	Michigan Vertical Flight Technology
2 nd	University of Maryland	College Park, Maryland, USA	Autonomous Micro Air Vehicle
3 rd	Ohio State University	Columbus, Ohio, USA	Buckeye Vertical

The remaining teams received the following Honorable Mentions from the judges:

<u>Category</u>	<u>University</u>	<u>Location</u>	<u>Team</u>
Best Drawing Package	McGill University	Montreal, Quebec, Canada	Aero McGill
Most Creative	Oregon State University	Corvallis, Oregon, USA	Beaverhawks 3.0
Best Computational Simulation	Pennsylvania State University	State College, Pennsylvania, USA	Autonomous Robotics Club
Most Manufacturable	Vaughn College of Aeronautics and Technology	Flushing, New York, USA	Vaughn UAV

A total of \$5,500 was awarded by VFS during the competition. In addition to the \$3,500 in final awards, \$2,000 had been awarded previously. In December 2020, each of the seven teams submitted preliminary design report. The results of the judging at that time were as follows:

- 1st Place: University of Michigan (\$750)
- 2nd Place (Tie): Oregon State University (\$500) and Ohio State University (\$500)
- 3rd Place: University of Maryland (\$250)

“All of the student teams did really impressive work,” said VFS Executive Director Mike Hirschberg. “Not only did they come up with exciting aircraft designs that had to meet the demanding competition requirements, they also had to deal with all the restrictions and uncertainty caused by COVID-19. They now are better prepared for designing real-life rotorcraft and eVTOL aircraft.”

VFS had intended to hold the competition during the same timeframe at the US Army’s Combat Capabilities Development Command (DEVCOM) Army Research Laboratory (ARL) Robotics Research Collaboration Campus (R2C2) near Aberdeen, Maryland. ARL signed a five-year Educational Partnership Agreement with VFS earlier this year in order to host the event and collaborate on vertical flight education outreach initiatives. Over the past year, ARL conducted significant work in preparing for the flight competition, including extensive planning for flight testing in April under COVID-19 restrictions. The Society is grateful for the US Army’s support of this important educational initiative.

The Vertical Flight Society encourages universities from around the world to form teams and take part in this exciting and challenging competition next year. Preparations are already underway, with the flight testing portion of the competition planned for the ARL R2C2 site next spring. Details will be announced this summer.

The Vertical Flight Society is the world’s premier vertical flight technical society. Since it was founded as the American Helicopter Society in 1943, the Society has been a major force in the advancement of vertical flight. VFS is the global resource for information on vertical flight technology. For more than 75 years, it has provided global leadership for scientific, technical, educational and legislative initiatives that advance the state of the art of vertical flight.

The Vertical Flight Society

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