



## 5th MAV Student Challenge Delivers Packages in Style

By *Jacqueline D. Banas*

AHS International's Unmanned VTOL Aircraft & Rotorcraft Committee held its Fifth Annual Micro Air Vehicle (MAV) Student Challenge at Forum 73 on Monday, May 8. This event was sponsored by Sikorsky Aircraft, a Lockheed Martin Company.

Jackie Banas led this year's competition. The theme was "Package Delivery in the Wild West," with the following Texas-themed mission: each autonomous or remotely-controlled VTOL aircraft was to attempt to drop off a letter at the house of an outlaw, pick up the Texas redbacks he stole, and return the money to the police headquarters, while avoiding the Will Rogers Memorial Center tower in the middle.

This year, 14 teams registered to compete in the challenge, from 10 different universities. Seven teams were downselected based on their submissions — four in the fully-autonomous category and three for remote control. The electric MAVs were required to weigh less than 500 g (17.6 oz) including batteries, and have a maximum size of 45 cm (17.7 inches) in any dimension. All entries were designed, built and programmed by university students. Each team also made a 5-10 minute poster presentation on their design process and system capabilities.

Three teams attempted manual flights: University of Maryland, College Park, Maryland; Vaughn College of Aeronautics and Technology, Queens, New York; and Concordia University, Montreal, Quebec. The autonomous teams who competed were from North Dakota State University, The Pennsylvania State University and Vaughn College.

University of Maryland and Vaughn College successfully completed the mission manually, with Maryland edging out the Vaughn team for first place, based on their MAV exhibiting superior flying qualities.

Concordia initially had some technical difficulties, and the Maryland team graciously offered replacement hardware to allow them to compete. This great act of sportsmanship allowed the Concordia aircraft to fly, but they were not able to fully complete the mission.

Despite having functional aircraft prior to the Forum, each of the autonomous category teams had last-minute hardware and software failures that prevented them from flying in the final competition.

A \$1,500 first prize award was presented to the University of Maryland team, and a \$1,000 second prize award was presented to the Vaughn College team for the manual flight competition. The members of the Concordia team (who drove straight from Montreal to Texas for the Forum!), as well as each of the autonomous teams, were awarded honorary mention certificates.

AHS International congratulates the students on all of the teams for their efforts in preparing for this year's difficult MAV Student Challenge!



Learn more at [www.vtol.org/mav](http://www.vtol.org/mav).



MAV Student Challenge teams, judges and faculty



University of Maryland won First Place



Vaughn College won Second Place



Concordia University won Honorable Mention