Press Release

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August 11, 2017

University of Maryland Takes Top Honors in AHS International's 34th Annual Student Design Competition

FAIRFAX, VA — AHS International — *The Vertical Flight Technical Society* today announces the winners of the 34th Student Design Competition: **University of Maryland won first place in both the graduate and undergraduate categories.** Sikorsky Aircraft Corporation, a Lockheed Martin Company, sponsored the competition this year with a total of $12,500 in prize money. (More information is available at www.vtol.org/sdc.)

The 2017 Student Design Competition was for a "*24 Hour Hovering Machine Conceptual Design*," which challenged students to design a heavier-than-air flying machine that could hover for 24 hours over three stations 1 km apart, carrying a human-sized payload of (80 kg) 176.4 lb. (These principal design drivers were based on the ongoing AHS International Igor I. Sikorsky 24 Hour Hover Challenge flying competition, also sponsored by Sikorsky Aircraft: www.vtol.org/challenge.)

Academic teams from around the world submitted entries in this year's Student Design Competition, including a record number of 12 proposals in the undergraduate category.

The winning teams for the graduate category are as follows:

Place	University (Graduate)	City, Country	Design Team
1st and Best Hardware Validation	University of Maryland	College Park, Maryland, USA	Elysium
2nd	Georgia Institute of Technology and Université de Sherbrooke	Atlanta, Georgia, USA and Sherbrooke, Québec, Canada	SWARM
3rd	Indian Institute of Technology Kanpur	Kanpur, Uttar Pradesh, India	Vibhram

University of Maryland's "*Elysium*" — the winning entry in the graduate category — is designed as an autonomous hybrid-electric hover-optimized twin-rotor helicopter. As an innovative application of existing state-of-the-art technology, *Elysium* represents a potential transformation in rotorcraft systems for unparalleled levels of hover efficiency and endurance, while minimizing total weight, mechanical complexity and maintenance time. In addition, the *Elysium* team also won the optional portion of the competition for Best Hardware Validation, testing candidate air-cooled and liquid-cooled motors for suitability of 24-hour long runtimes.

The winning teams for the undergraduate category are as follows:

Place	University (Undergraduate)	City, Country	Design Team
1st	University of Maryland	College Park, Maryland, USA	Chezoia
2nd	PFH Private University of Applied Sciences	Stade, Lower Saxony, Germany	Ephemeron
3rd	Georgia Institute of Technology	Atlanta, Georgia, USA	24 Hour Buzz
Best New Entry	Polytechnic University of Puerto Rico	San Juan, Puerto Rico, USA	Godwit Helicopter

The University of Maryland's "*Chezoia*" was the winning undergraduate design. Through the application of innovative design concepts and proven technology, based on recent advances in lightweight structures, engine design and hover efficient airfoils, the *Chezoia* is a multi-rotor platform projected to be capable of more than 24 hours of continuous hover.

The design competition sponsorship rotates between Airbus Helicopters, Leonardo Helicopters, The Boeing Company, Bell Helicopter Textron and Sikorsky Aircraft, with the US Army Research Laboratory joining the sponsorship rotation this year.

The competition challenges students to design a vertical lift aircraft that meets specified requirements, providing a practical exercise for engineering students at colleges and universities around the globe, and promoting student interest in vertical flight technology.

Each of the winning teams is awarded a cash stipend, while a member of each of the first-place winning teams is invited to AHS International's 74th Annual Forum and Technology Display — being held May 14-17, 2018 in Phoenix, Arizona USA — to present the details of their designs. Members of the teams receive complimentary registration to the AHS Forum, the vertical flight industry's principal professional technical event, which promotes vertical flight technology advancement.

For more information about the AHS Student Design Competition, please visit our website at www.vtol.org/sdc. The top-winning entries from the 34th Student Design Competition are posted on the site, along with previous winners. In addition, the 2017-2018 Request for Proposal (RFP) for AHS International's 35th Student Design Competition, sponsored by the US Army Research Lab is also now available. This new RFP is for "A Reconfigurable VTOL Aircraft."

AHS International hopes to encourage more universities from around the world to take part in this exciting endeavor, and aims to attract the best and brightest engineering students to the vertical flight industry.

AHS International is the world's premier vertical flight technical society. Since its inception in 1943, AHS has been a major force in the advancement of vertical flight. The Society is the global resource for information on vertical flight technology. It provides global leadership for scientific, technical, educational and legislative initiatives that advance the state of the art of vertical flight.

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