

First Flight ROV team takes design award at MATE Centers International Competition

After winning the Marine Advanced Technology Education (MATE) regional competition for the second year running, the First Flight High School Remotely Operated Vehicles (ROV) Team traveled to Buzzard's Bay, Massachusetts to compete in the international competition.

The team repeated their 2008 effort by winning the design elegance award for the overall best design of their underwater vehicle. The team also earned an overall sixth place finish out of the 26 Ranger Class teams.

Teams traveled from as far away as Hong Kong and Vladivostok, Russia to compete in this year's competition.

The 2009 competition focused on using ROV in submarine rescue missions. First Flight's vehicle was specifically designed to complete each task quickly and efficiently. Tasks included opening submarine hatches, delivering emergency supplies to the stranded submarine, and surveying the submarine with onboard video cameras to look for damage. ROVs are the preferred rescue vehicle since they put no further lives in immediate danger while rescuing stranded submariners.

The FFHS team who traveled to Buzzard's Bay included Barry Lawler, Sean O'Neal, Rebecca Charalambous, Miles Thomas, Andrew Radtke, David Spruill, and Charles Brady.

The ROV is driven from a control table at poolside where the pilots cannot directly see the ROV or the stranded submarine. All driving and navigation is

completed with a control panel and television monitor through video cameras mounted to the ROV. Communication between the students at poolside and those at the control table is strictly monitored by the judges.

The water mission has been designed so that it resembles a mission onboard a large research vessel or naval vessel deploying an ROV.

Judges and volunteers for the competition are professionals

from the ROV and engineering community. The competition gives the student participants the opportunity to interact with leaders in the field and educators from around the world.

One of the outstanding team members from FFHS ROV who graduated in 2008, Zach Miller, earned a scholarship for college through the competition sponsors. He also plans on doing an internship during the 2010 sum-

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ROV TEAM

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mer with one of the competition sponsors.

Team mentor and FFHS science teacher, Andrew Thomas, took the "MUD Wrestling" award. In this separate, light-hearted competition, team mentors build their own vehicles and duel in the pool.

MUD is the acronym for Mentor Underwater Demolition.

Thomas retained his title from last year's face-off at the international competition.

"The success of the FFHS ROV Team is directly related to the support the students garnered from their school and community. They would especially like to thank John McCord from the Coastal Studies Institute for getting them started and his continued support," stated Thomas.

"Additionally, the E.R. Midgett Insurance Agency; the First Flight Rotary Club; Dowdy and Osborne, CPA; Manage Now, LLC; Carolina Designs Realty; and Murray Auto Supply, all made generous donations that allowed the team to travel to Massachusetts for the international competition.

"We would also like to thank the Dare County Schools Technical Education Program for the purchase of building supplies and video cameras for the ROV," added Thomas.

The FFHS ROV Team is looking forward to another successful year and moving on to the International Competition in Hilo, Hawaii in 2010.

Thomas says the team of students always welcome donations and support — ranging from cash donations to supplies and technical expertise.

Currently, they are especially looking to purchase or build a 1,600 gallon test and demonstration tank to benefit all of Dare County Schools' ROV programs.

"This would allow us to share our knowledge and experience with area schools and the community at large," stated Thomas.

Beyond the bounds of competition, the team offers the real-world use of ROV *Calli Ray* to their community for underwater observation needs such as surveying boat damage, and inspections relating to docks and piers. Donations are accepted, but not expected, for their services.

Contact Thomas, at thomasan@dare.k12.nc.us for further information or questions.

Excelled at international competition



THE FFHS ROV Team completed the water mission with their ROV *Calli Ray*. FFHS ROV team members (at table, fore) wore signature light blue FFHS t-shirts (from left): Charles Brady, Andrew Radtke and Barry Lawler. Standing at poolside (from left): Sean O'Neal, Miles Thomas and David Spruill. Also pictured are competition judges, support staff divers, and at the end of the black cable, ROV *Calli Ray*. (photo by A. Conrad Neumann)