

FINNOVATORS

Newport robotics team places 14th in global competition

BY JOAN BROWN
Of the News-Times

LONG BEACH, CALIF. — Teamwork and problem solving ratcheted up the points for Newport High School's robotics team, the Finnova-

tors, at the Marine Advanced Technology Education (MATE) International Competition.

The Finnobot is the underwater ROV (remote operated vehicle) and brainchild of the Finnovators.

"The robot itself is an engineering marvel," said Liz Fox, mentor of the NHS Robotics Team and International Baccalaureate research and curriculum assistant.

Along with eight senior team members, now graduates

of NHS, the Finnobot was in Long Beach, California June 23-25 to compete against teams from all around the world.

Against 39 other teams in the Ranger class, the Finnovators earned enough overall

points to place 14th.

Events included poster, product, and marketing presentations, questioning by judges, and in-pool performances.

In-pool performances were timed, and teams were given

two tries to perform, Fox said. During in-pool performances only five students per team were allowed in the competition area, and no mentors or instructors were allowed.

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Team members Ryan Russell and Damion Chavez retrieve a prop from their ROV before lowering it back in the water to complete a challenge at the 16th annual MATE ROV International Competition in Long Beach, Calif. on June 25. (Photo courtesy of Alex Turpin)

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"It's neat that they do that, because we couldn't do anything for them," said Fox, who has been involved with the team and its competitions for nine years.

Within a limited time, getting the robot underwater to use a scoop to pick up sediment, or turn 360 degrees, takes considerable programming and power.

Things can go wrong fast, Fox said.

When things did go wrong,

team members had to come up with last minute solutions and then quickly coordinate their efforts.

"This makes a big difference for team building, and how to work in groups with no adult there to rescue them," Fox said. "If you keep the ROV working that's a huge accomplishment ... there were teams who were dead in the water."

Failure is also success, Fox continued. The real take-aways are teamwork and problem solving aspects, and seeing oneself as a member of a bigger community.

The MATE International Competition had two levels of competitors. Explorer, for college students, had 25 teams - 10 teams from the U.S. and 15 from other countries. Ranger, for high school students, had 40 teams - 26 from the U.S. and 14 from other countries.

Representing the Finnovators at MATE International Competition were: Gatlin Andrews, chief electrical engineer; Jostan Brown, chief engineer; Natalie DeWitt,

chief executive officer; Sophie Goodwin-Rice, marketing; Ryan Russell, systems engineer; Ruben Krueger, R&D officer; Alex Rash, chief financial officer; and Damion Chavez, chief operations officer.

Their poster explained that the Finnobot was designed and constructed over several months. It is relatively lightweight, constructed out of acrylic sheets, equipped with a claw, motors and cameras, and designed to work in ports and waterfronts.

"It is capable of collecting samples of sediment, locating and retrieving lost items, building underwater systems such as a Hyperloop, and maintaining a water and light show system. With these abilities, the ROV can complete tasks related to health, safety, commerce, and entertainment."

The Finnobot was totally designed by students.

The NHS robotics team formed in 2006 and is an extracurricular activity, not a class. They have two 3D printers and work in an elec-

tronics shop in the back of the library.

This was their second year at MATE International Competition. Last year they left the Houston, Texas competition in 28th place out of 39 competitors.

"This isn't about one single competition," Fox said, adding that team membership and competition experience is valuable when applying for scholarships

Engineering and applied science are also valuable ca-

reers, she pointed out, although the main draw to the team is simple.

"Robotics are fun," Fox said.



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