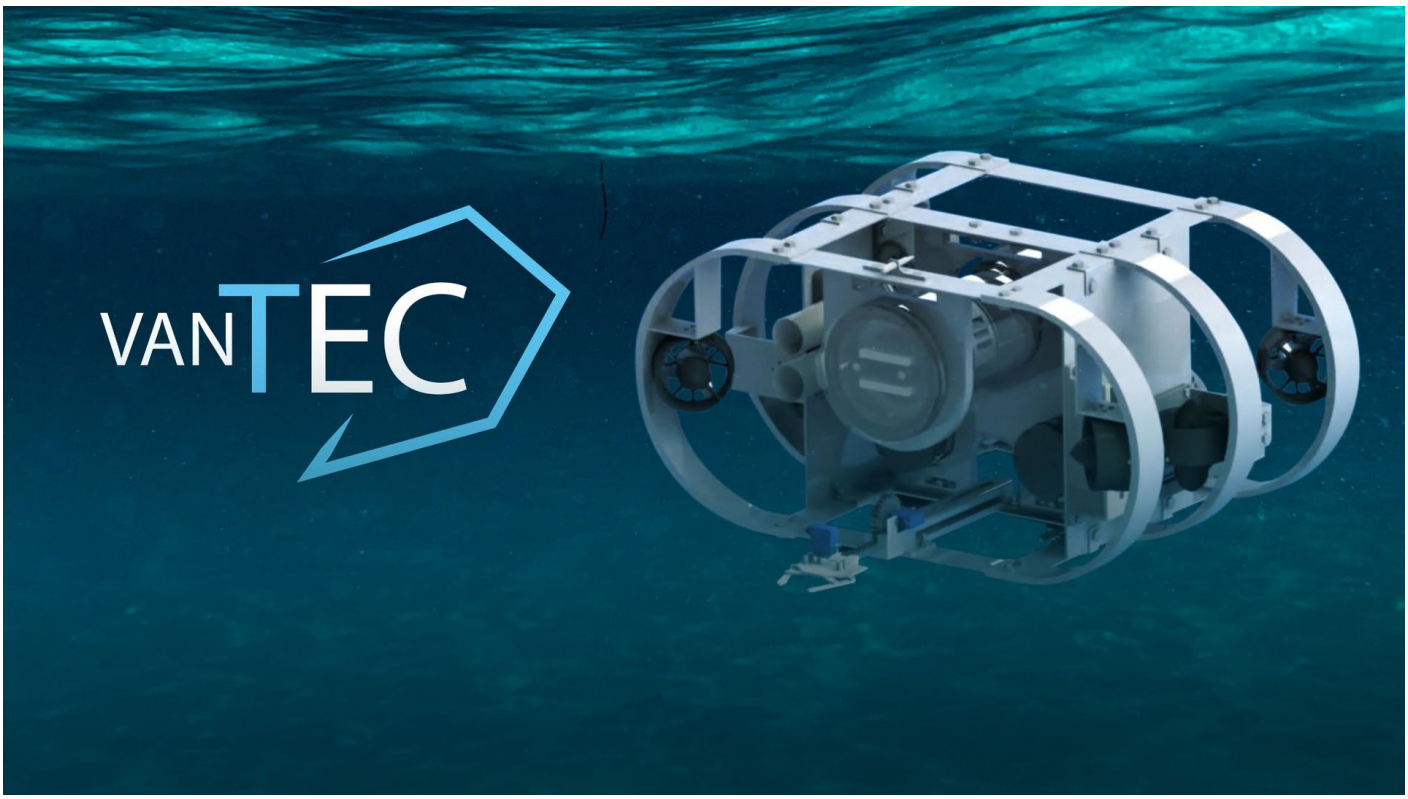
Making history! Team comes 3rd in international robotics tournament



With the creation of an **autonomous submarine prototype**, the **VantTec** student group from the **School of Engineering and Sciences** at the Monterrey campus became **the first Mexican team** to participate in the **RoboSub** competition and took **third place** out of **33 international teams**.

RoboSub is part of **the RoboNation** initiative that promotes **robotics** for the **creation of unmanned vehicles** using **science, technology, engineering and mathematics**.

The **twenty-third competition** was held virtually in August, with teams invited from countries such as **Brazil, Canada, Egypt, India, Mexico, Norway, Poland, Singapore, and the United States**.

The **VTec U-III** is the **third prototype submarine** designed by VantTec and was created to take part in this year's RoboSub competition.

The autonomous submarine prototype was created by the VantTec team to compete in the 2020 RoboSub competition.

The unmanned underwater vehicle is made of **lightweight materials** and includes **mechanical accessories** such as **a robotic arm, a marker dropper, and a torpedo launcher,** explained **Alejandro González García,** leader of the VantTec team.

"The competition involves a series of ***underwater challenges to test the submarine's abilities,*** *such as* ***navigating between obstacles, detecting and tracking acoustic signals, firing torpedoes, and manipulating objects****,"* he said.

In addition to **third place overall,** VantTec was awarded **first place** in the **"Best Video"** category and **fourth place** for **"Website".**

VantTec is made up of 42 students from the Monterrey campus, but this time only 21 team members participated in the competition.

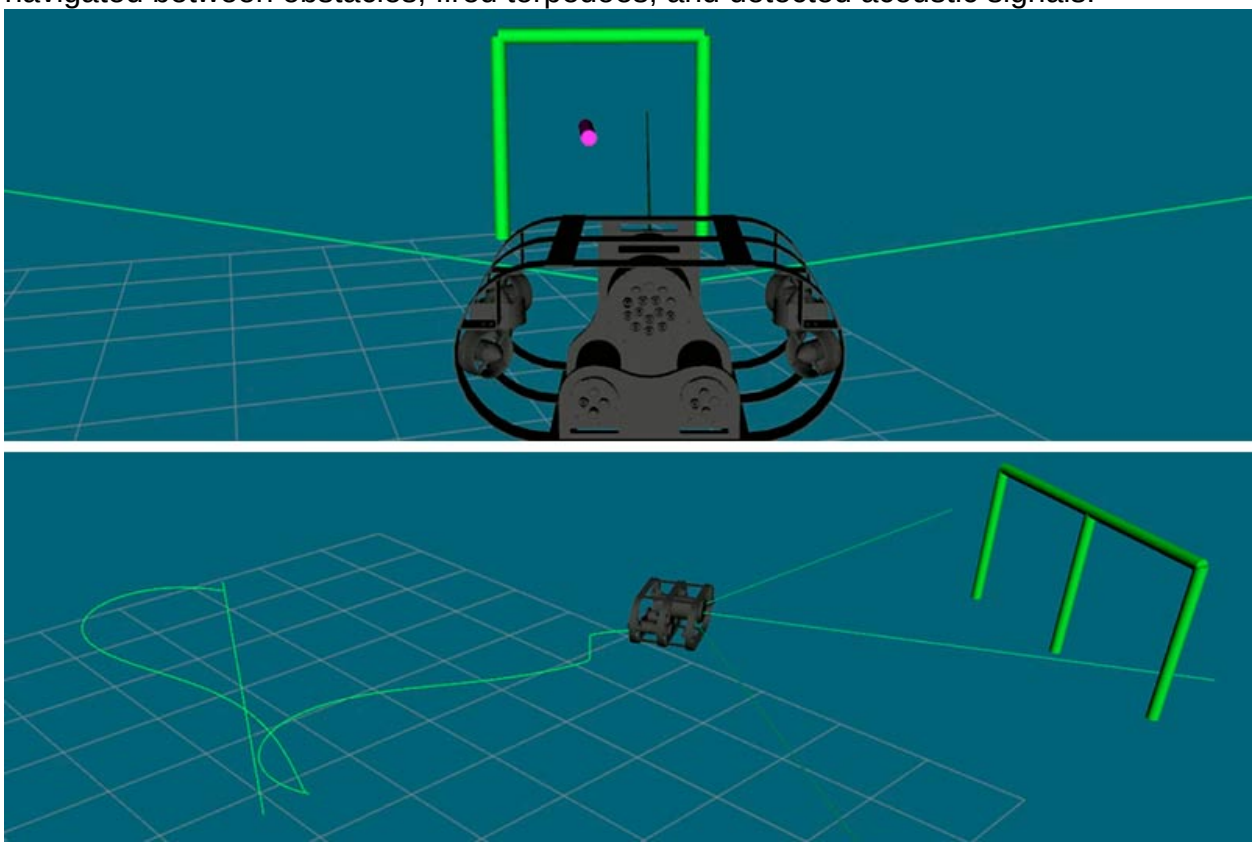
The recent graduate in **Mechatronics Engineering** pointed out that the submarine is currently at the design stage, waiting to be built once the health emergency is over.

*“Our main challenge has been mechanical, because the experience we have is with boats, so everything specific to **submarines** was a big change,”* he commented.

The team’s strategies to position itself within the first three places included **creating a flotation system that would equalize the density of the water.**

*“The submarine is about **75 centimeters** long and is made of **aluminum**. The **cylinders are made of acrylic** and inside it has **3D-printed parts**,”* he said.

The RoboSub test consisted of a series of simulations in which the submarine navigated between obstacles, fired torpedoes, and detected acoustic signals.



Going up in the world of robotics

VantTec was formed in 2017 at the **Monterrey campus, and** focuses on the **research and development of autonomous vehicles**.

*“Three years ago, we decided to **set three goals as a team**: win RoboBoat, participate in a non-boat competition, and inspire many more people to get involved in this area,” the* **Tec graduate** commented.

With these three objectives fulfilled, Alejandro assured us that VantTec will continue to develop as a more united team, and with an identity that differentiates them from others.

“The team has more of an idea about what it wants to do as a whole group, and it’s easier to work with the team members and convince them of what we’re doing with a strong identity,” he said.

Alejandro stated that VantTec will continue to prepare to compete in future contests, given that current triumphs have motivated them to continue representing **Tec de Monterrey** and Mexico with pride.

“As Mexicans, having a good showing has always given us satisfaction, but in this case, it was not only to be competitive, but also to win and show that we can be the best,” he explained.

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