

# Engineering students win international RoboBoat competition



Students from the **Tec Monterrey Campus** have won **first place** in the international **2020 RoboBoat** competition for designing and building an autonomous and fully robotic boat capable of overcoming various maritime obstacles.

**VantTec** is the name of this winning team, which is made up of more than 40 students from the Monterrey Campus **School of Engineering and Sciences**. They have participated in this competition since the team was created in 2017.

**RoboBoat** is a contest in which **teams from all over the world build autonomous boats**. These prototypes have to demonstrate great maritime robotic maneuverability.

This competition is part of the **RoboNation** initiative that seeks to promote **STEM (Science, Technology, Engineering, and Mathematics)** education to young people around the world.

The boats also had to be designed to tackle tasks that mimic the real-world challenges that the **maritime industry** faces, such as coastal surveillance, port security, and other types of oceanographic operations.

The VantTec team, made up of students from the School of Engineering and Sciences, designed and built an autonomous and fully robotic boat.



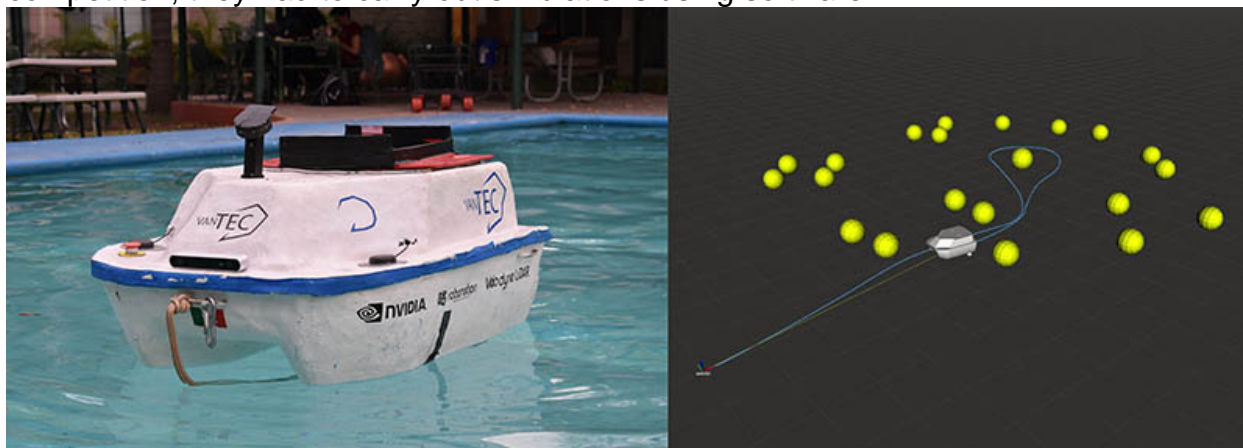
**Alejandro González García**, leader of the VantTec team, who is also a recent **Mechatronics Engineering** graduate, explained it as follows:

*“This is the fourth time we have competed in **RoboBoat**. On this occasion we made a fully electric one-meter long boat out of fiberglass, weighing 30 kilograms,”* he said.

The students were awarded a total of **four first places** for **“Best Video”**, **“Best Website”**, **“Best Technical Design Report”**, and **“First Place Overall”**, as well as a **special award** called **“Testing on the Horizon”**.

These categories were due to the current emergency situation that the world is going through, which forced this competition to migrate to a **digital setting**, creating an even greater challenge for the youngsters.

Previously, the students would physically perform tests with the boat. For this competition, they had to carry out simulations using software.



*“Normally we do tests in the pool, but this time we had to do simulations using software to test all the algorithms and overcome the challenges.*

*“The tricky part was placing the obstacles and simulating how the boat would dodge them,”* said Alejandro.

In addition to carrying out these simulations, the young people had to give an **overview of the boat**, which included the mechanics, the software, and the strategy to face the challenges.

In total, the students won a monetary prize of \$8,500 USD, plus recognition for their participation in the competition.

*“As a group, we’ve spent several years wanting to win **first place**. We never thought it would be this way; virtually and in the midst of a pandemic. That fills us with more pride,”* he said.

The winners were announced on July 26. The VantTec team was the **only Mexican team** competing against seven other teams from the United States, Puerto Rico, and Norway.

## PROMOTING SCIENTIFIC VISION

The goal of **VantTec** is to inspire young people to engage in research and development in their areas of interest in science and technology.

That’s why sharing this vision with students interested in science and technology has become an essential task for all its members.

One example of this is **Sebastián Martínez**, an **Engineering in Digital Systems and Robotics** student, who has been on the team since last August.

*“My role within the team was to support **software development** for the boat. It was difficult at first, because I had to understand all the previous work that had been done,”* he said.

The student recognized that one of the best things this competition had given them was the opportunity to **work online**, although he said they hope to return to campus soon to continue with the physical tests of the boat.

*“Winning the competition was very satisfying, especially knowing that I had taken part.*

*“The whole team did a really great job, we all contributed a lot,” he commented.*

Members of the VantTec team. For this year’s RoboBoat competition, only 18 students participated.



**School of Engineering and Sciences** Professor and VantTec advisor **Leonardo Garrido** from the Monterrey campus pointed out that this award demonstrates the interdisciplinary effort that students are making.

*“This award was a great challenge because I remember that this team started with only two members.*

*Thanks to this team, we have published scientific articles and it has served the students well, as some have gone on to master’s degrees from this,” he said.*

He also added that **VantTec** is a team defined by unity and collaborative work.

*“We are very happy with the results. I wish success to those who are already finishing their degrees. For those who are just entering, they can see the successes of their fellow students,” he concluded.*

For more information on VantTec, you can check their social media accounts: Facebook [fb.com/vanttec](https://www.facebook.com/vanttec), Instagram [@vanttec](https://www.instagram.com/vanttec), and Twitter [@vanttecmx](https://twitter.com/vanttecmx)

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