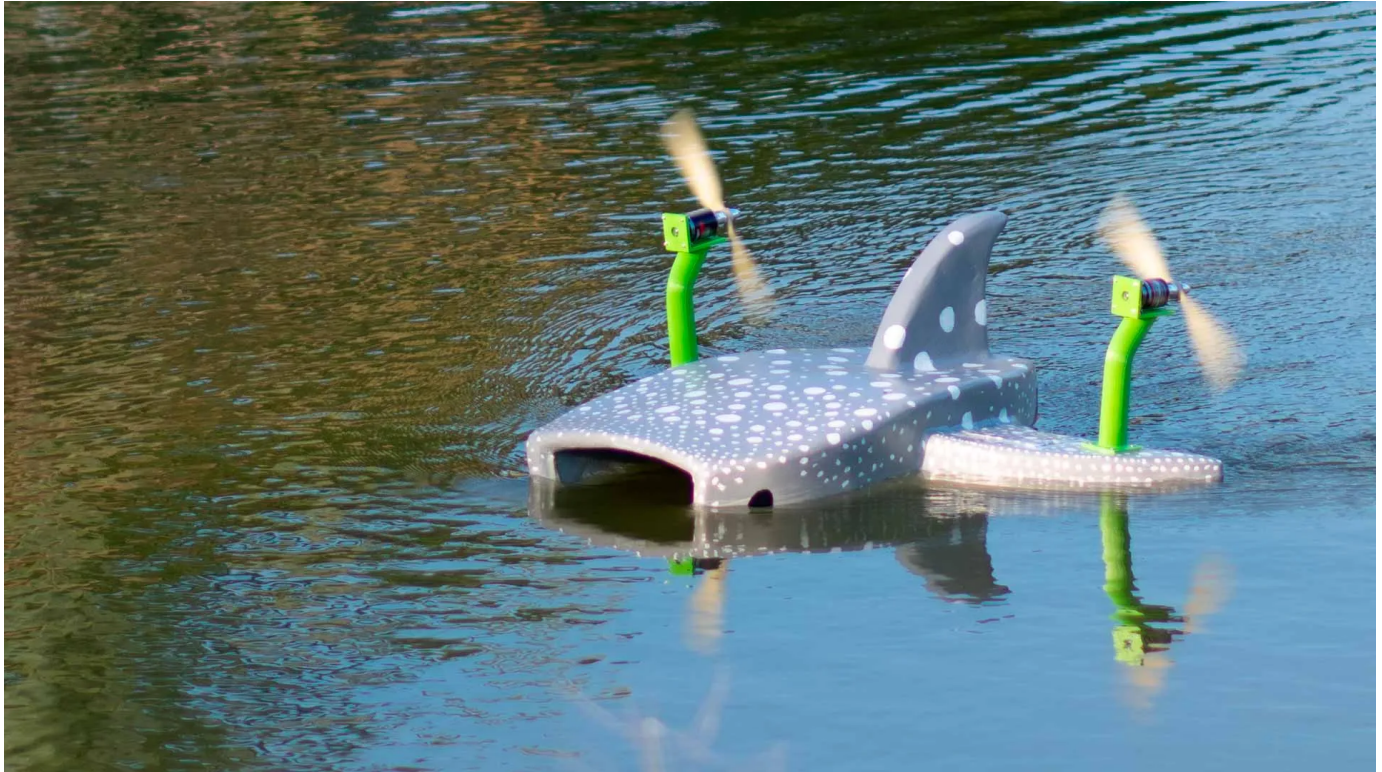


AKALI, the Mexican robot that will compete in an African robotics fair



María José Hernández and Luis Alberto López, both students from the Tec de Monterrey's Sinaloa campus, will go to Tunisia, Africa, with their AKALI project to represent Mexico in an international robotics competition

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PrepaTec Sinaloa students, **María José Hernández and Luis Alberto López**, will represent Mexico at the **International Festival of Engineering Science and Technology** in **Tunisia**, in August 2021.

As a result of their performance in the **Expociencias Sinaloa 2020** contest, they will go on to participate in the **international contest**, considered to be one of the largest **international robotics fairs** in **Africa**.

They created **AKALI**, a robot which makes it easier to **clean the surface of water** to prevent trash from reaching the open sea.



Working together since 2018, the students achieved the following results in **various competitions**:

- *Bronze medal in the Multimedia Project competition in 2019*
- *First place at Expociencias Sinaloa 2020*

AKALI stood out **as being the best robot in the competition**, gaining an overall score of **297 out of 300**, the highest **achieved at Expociencias Sinaloa 2020**.

Perseverance and resilience: their greatest virtues

As a result of her triumph, María José says that they have been motivated to continue working together to prove that **technology can support us** and help us

make the **world a better place**.

What's more, the young woman confirmed that being able to represent her country in this international competition **inspires** her to **give the world a good impression of Mexico**.

*"I want to show the world that Mexicans are **honest, persevering, and hard-working people** who can achieve great things,"* said María José.

*"We focused on **cleaning these bodies of water** because they are the arteries of the planet and, unfortunately, it is through them that **most of the waste ends up in the sea**,"* she added.

Luis Alberto López declared that he is proud of the work they have done. After so much **effort, work, and dedication**, they have accomplished one more of their dreams.

*"We had been trying for several years, so it was quite a surprise to know that we had finally achieved this. It showed us that **persisting in spite of a challenge** really does work,"* said Luis Alberto.

Similarly, María José recognized that **resilience** was very important in getting to where they are today because it led them to continually **challenge themselves**.

*"Each experience meant a new opportunity for learning. After each competition, we dedicated ourselves to **reflecting** upon what we needed to improve,"* shared María José.



AKALI, the robot that removes pollution

Thus far, the robot works **manually** using a **radio control**, which can direct it to where the waste is so **it can collect it and store it**.

*"We are very grateful to the **Tec, Lodos SPA, Cargas, and the Sinaloa Science Center** because we have been able to further develop AKALI as a result of their support,"* said Luis Alberto.

They are also grateful for the support of their advisers, **Professor José Pablo Álvarez** and **Dr. Abraham Calderón**, who were there to guide them throughout the project.

Jose Pablo Alvarez, a faculty member at **PrepaTec Sinaloa**, maintains that the initiative of projects such as **AKALI** demonstrate that **the big problems** facing

society today can be resolved.

*“Science is a great tool for everyone’s advancement and the most important thing is that, through **effort and dedication, it’s possible to achieve more environmental goals** like this one,”* added the professor.

Right now, María José and Luis Alberto are working on improving **AKALI** by taking advantage of **3D printing** to use biodegradable materials and continuing to protect the environment.

The prototype has already completed tests in lakes, and the students hope to start cleaning up the **Tamazula River** soon. Following this, they aim to extend the impact of the project across **Culiacán** and throughout **Sinaloa**.



Pollution: a problem of misinformation

According to the students, a large part of the problem comes from **misinformation**, which is why they also work on awareness programs and invite the public to take care of water sources.

“It is important that children and young people work to apply science, engineering, and technology to environmental ends because, as the UN’s 2030 Agenda says, it has to be a priority,” emphasized María José.

Finally, the students ask you to join them in **looking after water** by connecting with them via Instagram @proyectoakalimx, so that society can have a positive impact on the environment.

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