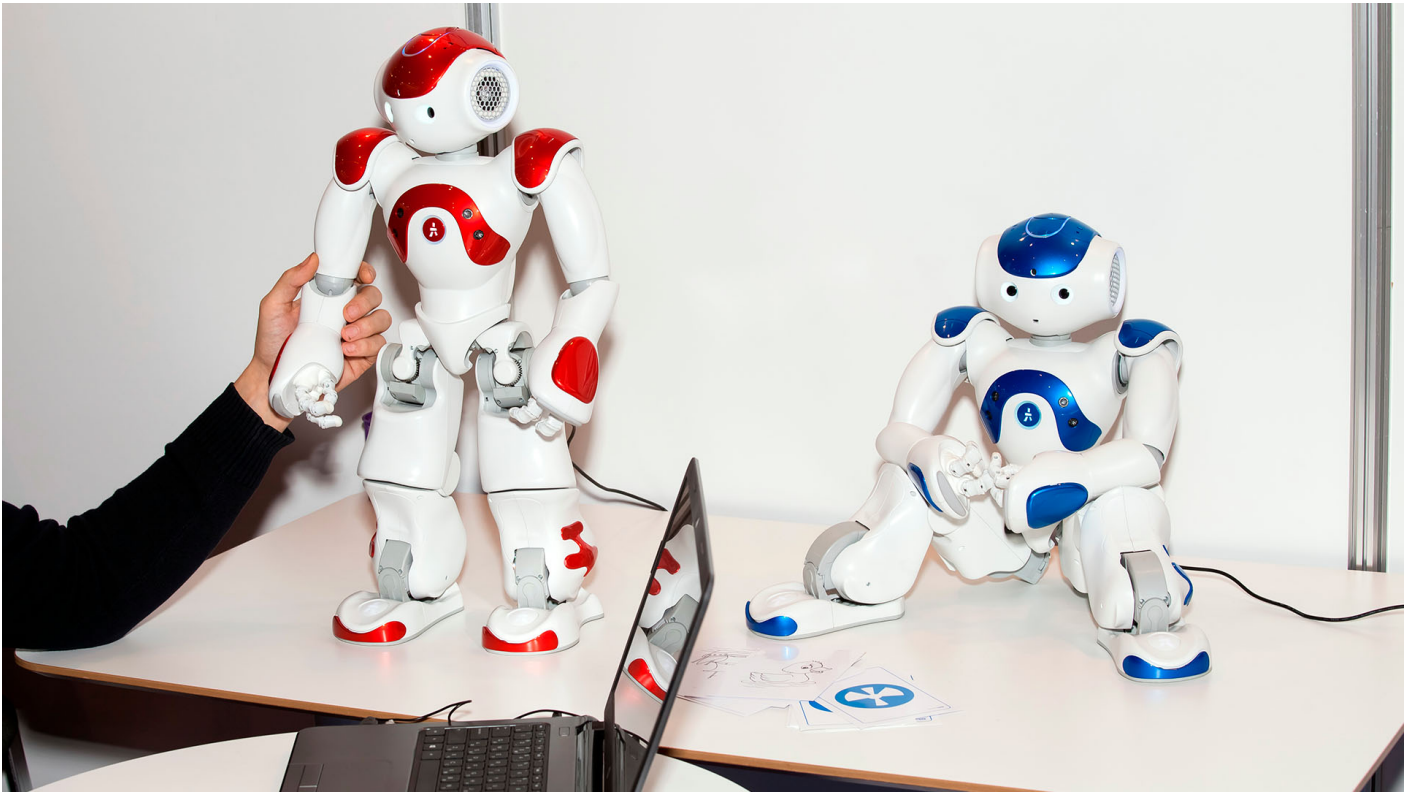


# Tec professors develop therapy program with robots



**Enrique Chong**, director of the mechatronics department at the Tec's **State of Mexico campus**, and **Edgar López**, a professor from the mechatronics department at the **Mexico City campus**, have developed an **interactive program using robots** for the **Foundation to Assist the Mentally Challenged** (FADEM for its initials in Spanish).

This foundation **assists women with learning disabilities** at its two sites, one in the State of Mexico and the other in Mexico City. Patients include **girls from the age of 12 to women over 70 years of age**.

**Fabiola Sánchez**, a special education professor focusing on learning disabilities at the foundation, explains that the robot program **provides physical therapy** that helps patients maintain and even **develop some of their abilities so they can have a better quality of life**.



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## Robots with social impact

The development of the NAO robots began in 2004, and they were made available for academic and research purposes in 2008.

The [NAO](#) robots used in the therapies of the foundation's patients are manufactured by '[SoftBank Robotics](#).'

These robots are used in **therapy for children** in the United States and Europe.

*"We started with one robot, **Atom**, then we added **Itzel and Tesla**, and the last one we acquired was **Curie**. They are all NAO robots, but we give each one a name.*

*"Interaction with patients **becomes easier when each robot has a name and personality**,"* Edgar explained.

In the wake of the pandemic in 2020, **professors Enrique and Edgar** sought to continue the foundation's physical therapy program with robots, doing so via **remote computer interaction**.

*"Interaction with patients **becomes easier when each robot has a name and personality**." -*  
**Edgar López**



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### **The challenge of distance therapy**

Fabiola explains that it was a big challenge for the girls to be able to focus their attention on a screen.

*“It was unusual for them to be able to take therapy using a computer. It was completely different, as they’re used to physical contact.”*

*“The first thing was to get them to fix their attention on the computer. There’s a big difference between seeing the robot physically and on a screen. Eventually, the girls were able to pay attention and do the exercises **with the support of our carers**,” she explained.*

**Programming robots for therapies** is done as part of students’ community service at the Mexico City campus. However, many students continue supporting the foundation after finishing their community service requirement.

*“The students remain very involved in the cause. **It’s not just a community service activity. Some continue to help the foundation in different ways.** It provides great satisfaction to everyone”,* said Fabiola.

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