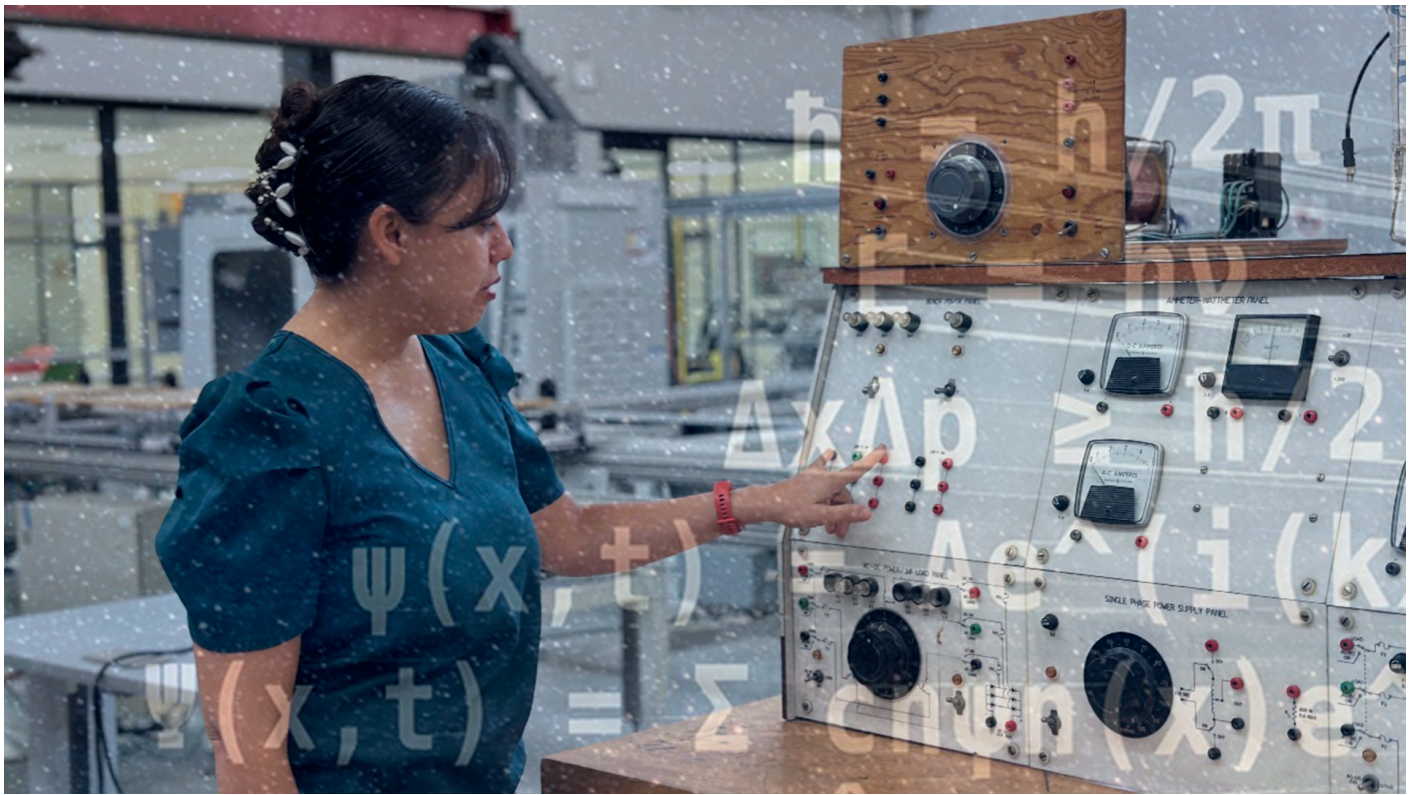


Tec + ASU: Professors promote innovation in data processing



Three professors from Tec de Monterrey are working on a **research project with Arizona State University (ASU)** that aims to **improve data processing using quantum mechanics** (<https://www.dw.com/es/mec%C3%A1nica-cu%C3%A1ntica/t-63718236>).

They are **School of Engineering and Sciences (EIC)** professors Rafaela Villalpando, from **Laguna campus** (<https://tec.mx/es/laguna>); César Vargas Rosales, from Monterrey campus; and Francisco Javier Delgado Cepeda, from State of Mexico campus.

These School of Engineering and Sciences research professors are working in collaboration with academics at ASU's **Sensor, Signal & Information Processing Center (SenSIP)** to **innovate on information processing**.

Rafaela Villalpando from Laguna campus explained that this research could lead to a **quantum computer doing something in a minute that a supercomputer currently takes a month or a year to do**.

*"It would totally shift **the computing and telecommunications paradigm** as we know it," she said.*

*"**This research could revolutionize the way we process, transmit, and secure information**".*

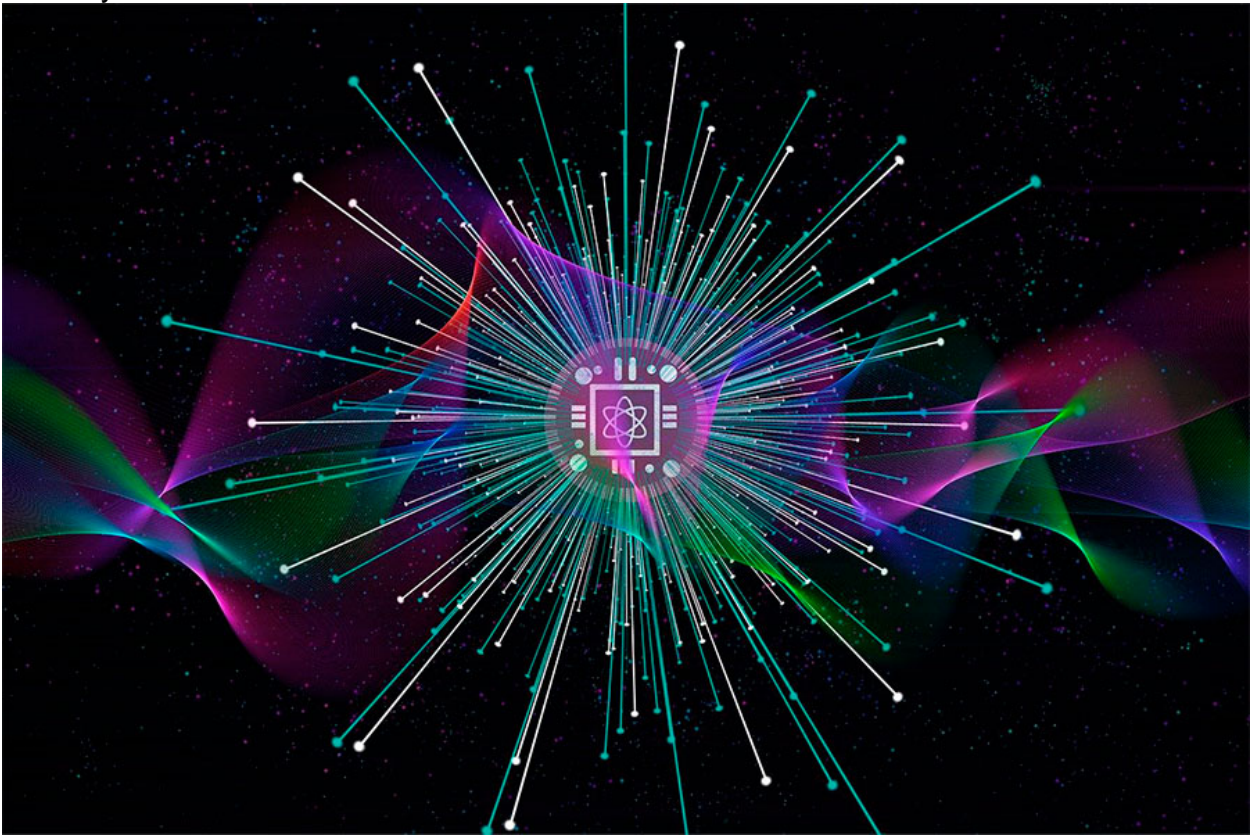
Developing research using quantum mechanics

The engineering professor at Tec de Monterrey in Torreón said that this research addresses **quantum mechanics applications for telecommunications**.

She explained that they are analyzing topics such as interference, security, encryption, and wireless networks “*which could **revolutionize** the way we **process, transmit, and secure information.***”

“*The concept of quantum entanglement allows us to develop **a new way of processing information using machine learning methods and quantum security systems,***” she explained.

Their research focuses on quantum mechanics in information processing. Photo: Pixabay



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She said that although the research is in its early stages, they have already identified **areas for collaboration between the Tec, ASU, industry, and graduate students**. Some of these include:

- *Attracting funding for joint research*
- *Promoting academic collaborations between campuses, and*
- *Fostering talent for graduate studies in engineering sciences*

She also mentioned that the next effort will be “at least **one joint article** as evidence of the *collaboration and to continue to attract funding.*”

“There is a lot of willingness to cooperate. The Tec and ASU have been working together for more than 10 years.”

Collaboration between the Tec and Arizona State University

Finally, Rafaela Villalpando mentioned that **the relationship between the Tec and Arizona State University has existed for more than 10 years.**

*“There is a **lot of willingness to cooperate.** We’ve been working together for more than 10 years,”* she said.

She explained that, during this time, they have participated in **conventions, publications at conferences, and even in scientific journals.**

There have also been **discoveries** about the similarities and differences in the relationships between academia, industry, and government in Mexico and the United States.

*“Collaborating with other universities opens up new perspectives on how to **obtain resources, connect with industry, and expand research,**”* she concluded.

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