

Stop! Tec researchers seek to slow down aggressive drivers



Researchers and students at **Tec de Monterrey in Mexico City** are working on an engineering project which studies real time driver behavior via a **component inserted in automobiles** and which avoids road accidents through a braking system.

This development **assesses the attitudes of those who are behind the wheel** and will become a support for drivers.

Not only does it focus on the use of sensors which automatically respond to specific behaviors, but it also gives motorists the opportunity to **adapt their driving style** so that they are not aggressive and can drive responsibly.

*“Our goal is to **help save the greatest number of lives** possible through our engineering expertise. We know that road accidents happen frequently,”* said Pedro Ponce, a professor and researcher at Tec de Monterrey.

If the system **detects that the driver is behaving aggressively** while driving, **it will repeatedly interfere** so as to prevent an accident.



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The main idea focuses on **sending different stimuli to the driver**, depending on their personality and driving style.

*“According to the National Institute of Statistics and Geography, there were **13,946 road accidents** related to **driver behavior** in Mexico City during 2018.*

*“As a result of the research we have done, we know that many of them were caused by **behaviors which can be detected and corrected** in a timely manner,” he added.*

This could be extended to route search platforms which, depending on driving characteristics, could set proposed routes in order to **save lives**, and ensure not all drivers are given the same directions.

The project also aims to **promote safe driving** and minimize the number of road accidents.

The **project team is made up** of Dr. Pedro Ponce, engineer Germán Baltazar, and students José Alberto Galván Hernández and Uriel Sierra Cruz.



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*“We’re using **Signal Detection Theory** to carry out the project, and to evaluate whether drivers have passive or aggressive tendencies while driving.*

*“The aim of this study is to develop a survey which can evaluate the knowledge and reactions that an ordinary driver has when they are behind the wheel, and compare them to the ‘correct’ answers provided by an expert such as a **driving instructor**,” said Baltazar.*

According to a study of road safety in the Americas undertaken by the Pan American Health Organization, Mexico ranks **seventh in the world** in for this type of accident.

The project is currently in the testing stage and is using ride-on electric vehicles so as to determine the effectiveness of the **system on a small scale** with easy-to-use obstacles.

It is hoped that **tests** will be carried out in 2021 on sedan-type vehicles in real driving environments.

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