

Eco-driving and safe driving technology to save lives, environment and money

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Atiyeh Vaezipour with a prototype of a new device to help drivers use less fuel.
Credit: Queensland University of Technology

Road safety researchers at QUT are developing innovative in-vehicle technology to improve safety and save dollars at the petrol pump, and are looking to test it out on Brisbane drivers.

Atiyeh Vaezipour, from QUT's Centre for Accident Research & Road Safety – Queensland (CARRS-Q), has designed an in-car device that aims to persuade [drivers](#) to adopt a fuel efficient and safe driving style.

"By using technology we believe we can encourage people to be eco-friendly as well as safe behind the wheel," Ms Vaezipour said.

"I think drivers want to save a dollar and want to be more environmentally savvy when it comes to driving, they just need to be shown how."

As part her PhD project, Ms Vaezipour has developed a prototype interface to encourage eco-driving and safe driving, which will be tested by Brisbane drivers in the CARRS-Q simulator.

"We have designed a prototype and we now want to test it with drivers for usability and actual desire to accept the system in real life," she said.

Ms Vaezipour said the testing phase, scheduled to start in January, would involve volunteer licensed drivers getting behind the wheel of the CARRS-Q simulator at Kelvin Grove and undertaking a number of simulated driving tasks lasting 10-12 minutes duration each.

"The drive will be recorded and special sensors will monitor acceleration and braking performance," she said.

"During the different driving scenarios, drivers will be asked to use the device which provides real-time individual advice and feedback to improve safety and reduce fuel consumption.

"Participants will then be asked to answer a short anonymous survey to comprehensively evaluate the effectiveness and driver acceptance of the system, as well as any distractive qualities."

Ms Vaezipour said road transport systems played a vital and valuable role in society, but came at a significant cost and impact to our global footprint.

"Our ever-increasing reliance on motor vehicles results in more vehicles on the road, which increases pollution and road crashes and has a serious

impact on our health and environment," she said.

"My goal is to reduce [road](#) trauma, fuel consumption and emissions with a single device.

"Eco-driving has been demonstrated to be a cost-effective approach to reducing [fuel consumption](#) by as much as 10 to 25 per cent."

The CARRS-Q prototype is made up of an LCD screen, fitted within a 3-D printed casing and the technology to provide real-time data to the driver.

To volunteer for the study, email a.vaezipour@qut.edu.au or for more information visit, <http://www.carrsq.qut.edu.au/simulator-study/index.jsp>

To recognise participants' contribution, travel costs and time spent in the simulator study, the research team is offering a \$20 Coles/Myer voucher for completing the initial familiarisation with simulator, and another \$40 when completing the study.

Provided by Queensland University of Technology

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