**The Future is Connected**

Early warnings about pedestrians crossing a signalised intersection, red light violations and traffic queues are just some of the latest advanced vehicle warning systems being evaluated by CARRS-Q.

The Ipswich Connected Vehicle Pilot, Australia’s largest on-road field trial to test and evaluate Cooperative Intelligent Transport System (C-ITS) vehicle safety technologies is being delivered by Queensland Department of Transport and Main Roads and iMOVE CRC.

The trial is also supported by CARRS-Q. Dr Mohammed Elhenawy unveiled details as to how the driver safety data will be assessed at the 6th Australian ITS Summit in Sydney.

C-ITS devices will enable vehicles to communicate with other vehicles and infrastructure, such as traffic lights, as well as road operations and cloud-based sharing systems, in real-time.

“We are evaluating the safety benefits of the C-ITS by examining the difference in driver behaviour when the message system is active and inactive,” Dr Elhenawy said.

**Dr Andy Bond**, Director of the research team, said the trial was an opportunity to validate the safety benefits associated with greater awareness and instrumentation of transport systems.

“By working together with greater, targeted information, drivers and ultimately vehicles can better manage challenging driving scenarios,” Dr Bond said.

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**French connection to deliver Queensland’s first automated test vehicle**

Queensland will soon welcome its first purpose-built automated vehicle, following the signing of an international agreement that will ensure the state is prepared for the future.

Delivering the keynote address at last night's Australian Intelligent Transport Systems Summit in Sydney,
Transport and Main Roads Minister Mark Bailey said on-road testing of the automated vehicle was an integral part of Queensland’s preparation for advanced vehicle technologies.

“Plans are underway to test vehicles with automated driving capabilities as part of the Department of Transport and Main Roads’ Cooperative and Highly Automated Driving (CHAD) Pilot,” Mr Bailey said.

Mr Bailey said the Palaszczuk Government had partnered with the Queensland University of Technology (QUT) and iMOVE Cooperative Research Centre (iMOVE CRC) to explore the safety impacts of automated vehicles on our roads, and to allow road users to see and experience them.

“Through QUT’s partnership with VEDECOM, a French collaborative research centre, we will test automated vehicle safety across five areas – roads, roadsides, vehicles, road users and speeds,” Mr Bailey said.

This project will include CARRS-Q researchers Professor Sebastien Glaser, Professor Andry Rakotonirainy, Dr Andy Bond, Dr Ioni Lewis, Dr Sherrie-Anne Kay and Dr Sebastien Demmel.

**Augmented Reality meets Driverless Vehicles**

PhD Scholar, Michael Gerber, aims to discover the best mode through which the status of a vehicle and its current environment can be conveyed to the driver of that vehicle, using Augmented Reality (AR), to increase Situation Awareness and improve safety during “Takeover Requests”.

During automated driving, drivers would be able to perform other non-driving tasks such as reading and watching movies, however they will be required to remain “fallback-ready” in the event the vehicle signals a request for driver takeover. However, this raises human factors challenges, such as lack of situation awareness and mode awareness, which will need to be overcome to ensure this transitory step is effective.

This research is an ARC Linkage project with industry partner SeeingMachines and QUT, under the supervision of Dr Ronald Schroeter. The impact of this research will potentially accelerate the safe introduction of AVs to the public, and will ensure the environmental health and mobility benefits associated with this revolution.

Ronny and Michael won Best Demonstration Award at the 2018 Automotive User Interfaces (AutoUI) Conference in Toronto last month.

**Innovative project seeks Partners**

CARRS-Q and QUT Design Lab are taking a bold step towards the e-bike mobility revolution.

Through the development of a new Inter-Campus e-bike Sharing Research Platform, an alternative mode of transport between QUT’s Gardens Point and Kelvin Grove campuses will be offered from Semester 1, 2019. Over the course of 3 years, e-bikes will be equipped
with the latest sensor and ITS technology, off-the-shelf advanced safety features, newly designed Advanced Cycling Assistance Systems (ACAS), as well as tailored QUT-designed prototypes, which will be trialled and evaluated by CARRS-Q.

**What do we need?**

We invite industry partners to join us on this journey and help shape this 3 year project. We are asking for non-binding letters of support towards an ARC Linkage Project application by the end of this year. The letter should provide details of your cash contribution and in-kind support.

**What's in it for you?**

Align your brand and connect with the future to deliver this innovative project. Together with other industry partners, our joint expertise, shared decision-making and input will guide this 3 year project to fruition.

CARRS-Q is strongly committed to this proposal, contributing $10,000 upon submission of the application, and an additional $10,000 if successful.

**Interested?**

Contact Dr Ronald Schroeter: r.schroeter@qut.edu.au/+ 61 7 3138 4629

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**Did you Know ...**

CARRS-Q boasts the largest ITS research team in Australia.

**EDUCATION UPDATE**

**Congratulations to our recent PhD Graduates!**

**Bevan Rowland** - *An Exploration into Work-Related Road Safety: A Multi-Dimensional Approach.*

**Yusuf Adinegoro** - *Using Instrumented Motorcycle Data to Study Road Factors Influencing Motorcycle Crash Risk and Severity*

**Wahi Rabbani Rash-ha** - *Towards an Understanding of the Factors Associated with*
Severe Injuries to Cyclists in Crashes with Motor Vehicles

Innovative Directions for Older Road User Safety & Mobility Seminar

As part of Queensland Road Safety Week 2018, CARRS-Q hosted this seminar and discussed how our rapidly ageing population, faced with emerging technology, could rise to the challenges to ensure safe mobility of older road users.

Presentations to the 70 delegates were delivered by Department of Transport & Main Roads, Council on the Ageing Queensland (COTA), RACQ, QUT School of Optometry & Vision Science and CARRS-Q.

Capacity Building Program

This month, Doug Brownlow, with contributions from Dr Mark King, Professor Barry Watson, Dr Angela Watson and guest presenters including alumnus Dr Lyndel Bates, will deliver a two-week capacity building program to a group of Indonesian National Traffic Police. The group are currently undertaking postgraduate research in the field of road safety at the Universitas Indonesia. The CARRS-Q program will consist of course delivery together with mentoring and support during thesis and conference paper writing. The program continues long-standing road safety capacity building activities between CARRS-Q and Indonesia.

International Visitor

Loughborough University's Pro Vice Chancellor (Research) Steve Rothberg, Professor of Vibration Engineering and a Fellow of the Institution of Mechanical Engineers, visited QUT last month, meeting with CARRS-Q and Australian Centre for Robotics Vision.

CARRS-Q will continue collaboration with Loughborough University through alumnus Dr Ashleigh Filtness.
8 DECEMBER 2018 - 9AM-4PM
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New Grants and Commissioned Research

Mitigating signal colour-misconceptions from prescription lenses worn by train drivers Dr Gregoire Larue

Provision of Services to monitor and progressively evaluate the implementation of SLOMO in Western Australia Prof Narelle Haworth, Dr Matthew Legge, Dr Ross Blackman & Prof Barry Watson

Can voluntary apps reduce mobile phone use while driving? Dr Mark King & Dr Oscar Oviedo-Trespalacios

Distracted Driving Program Prof Barry Watson, Prof Katherine White, Dr Ioni Lewis, Dr Cassandra Gauld, Dr Oscar Oviedo-Trespalacios, Prof Ross Young, Prof David Kavanagh, Dr Shimul Haque

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