

International Driverless Cars Conference

Adelaide, South Australia, 5 & 6 November 2015



Conference Partners:



Carnegie Mellon University
Australia



In conjunction with Australia's first on-road driverless car trials:



IT'S HOW
WE CONNECT



ADELAIDE
SOUTH AUSTRALIA



Government of South Australia
Department of Planning,
Transport and Infrastructure



MESSAGE FROM THE PREMIER OF SOUTH AUSTRALIA

It is a great pleasure to welcome overseas and interstate delegates to Adelaide for the International Driverless Car Conference.

The automotive industry has been central to South Australia's economy and identity for about 100 years. And we are today perfectly placed to play a constructive role in the development of the booming driverless car sector – an industry forecast to be worth more than \$90 billion globally by 2030.

This Conference brings together many world-leading experts to discuss not just the vehicle technology, but also the regulatory, planning and social implications of the widespread use of self-driving cars.

I am pleased the Conference will involve a series of demonstrations and exhibitions at the Torrens Parade Ground.

And it is exciting that the event will serve as a lead-in to driverless-car testing, by ARRB's Australian Driverless Vehicle Initiative, Volvo and Telstra on Adelaide's Southern Expressway – the first on-road trials to be held in the Southern Hemisphere.

The Australian Driverless Vehicle Initiative being coordinated by the South Australia division of ARRB Group, is a unique collaborative effort between government, global industry and academic organisations from technology, telecommunications and automotive expertise, including South Australian universities and Cohda.

Long regarded as an "incubator" of ideas, creativity and technological breakthroughs – and now with a regulatory environment conducive to thorough testing – South Australia is very keen to forge partnerships with advanced auto manufacturers.

Being involved in the fast-growing driverless-car sector is very much in line with South Australia's Economic Priorities, including those designed to:

- make ours the Knowledge State and encourage the commercialisation of research;
- foster growth through innovation; and
- promote the State's international connections and engagement.

I look forward to officially opening the International Driverless Car Conference, and I have every confidence it will prove stimulating, constructive and of long-term benefit to both the global automotive industry and South Australia.

Also, I hope visiting delegates will find the time to experience many of the other things that make Adelaide so special – including our superb food and wine, our beaches and our parklands.

Hon Jay Weatherill MP
Premier



MESSAGE FROM THE MINISTER FOR TRANSPORT AND INFRASTRUCTURE

It is with great pleasure that I welcome you to South Australia for the first ever driverless car conference to be held in Australia.

Our state offers the best of Australia: world-renowned regions including the Barossa Valley, Kangaroo Island, Flinders Ranges and a well-planned city which makes us one of the most liveable cities in the world.

South Australia is a place where entrepreneurs, industry, universities and government work collaboratively to turn great ideas into investable products and growing businesses that create the jobs of the future.

South Australia is a truly innovative and creative State – that welcomes ideas and investments for our future, like driverless cars.

The Government of South Australia recognises the significant benefits that autonomous vehicles and intelligent transport systems will bring to our communities. As a result it is working to support their development and introduction into Australia.

Our strengths in innovation and a welcoming regulatory environment for testing autonomous vehicles combine to make South Australia an attractive destination for global firms to test, develop and trial their technology for Australian roads.

Unlike some other countries, we will not restrict trials to the test-tracks, and we won't require special permits. Anyone wishing to conduct tests will simply be expected to submit a plan of operation and ensure test vehicles are operated safely whilst on public roads.

The Government of South Australia is committed to working hard with the private sector to create the best conditions for designing, testing and supporting the automotive technologies of the future.

Hon Stephen Mullighan MP
Minister for Transport and Infrastructure



Keynote Speakers



Dr Trent Victor

Senior Technical Leader Crash Avoidance, Volvo Car Corporation, Sweden

Dr Trent Victor is Senior Technical Leader Crash Avoidance at Volvo Cars Safety Centre where he provides leadership in safety analysis and human factors research to achieve Volvo Vision 2020. He is Director of Safety within the Drive Me self-driving cars program at Volvo, Adjunct Professor in Accident Avoidance at Chalmers University of Technology within SAFER – Vehicle and Traffic Safety Centre at Chalmers, and Adjunct Professor at University of Iowa.



Professor Alan Stevens

Chief Research Scientist, Transport Research Laboratory, Chairman of Intelligent Transport Systems, United Kingdom

Professor Alan Stevens is a Chief Scientist and Research Director at the UK's Transport Research Laboratory (TRL) where he has been working on the application of new technology for over 25 years.

He is Chair of ITS United Kingdom and a Fellow of the Institution of Engineering and Technology (IET). He has authored and co-authored more than 120 published articles, reports and papers on Intelligent Transport Systems (ITS) including being a co-author of the "European Statement of Principles on Human Machine Interfaces".



Professor Raj Rajkumar

Professor and Co-Director, General Motors-Carnegie Mellon Connected and Autonomous Driving Collaborative Research Laboratory, United States

Professor Raj Rajkumar is the George Westinghouse Professor of Electrical & Computer Engineering and Robotics Institute at Carnegie Mellon University. He directs the National University Transportation Centre on Safety and the Real-Time and Multimedia Systems Laboratory (RTML), and co-directs the General Motors-Carnegie Mellon Connected and Autonomous Driving Collaborative Research Laboratory (CAD-CRL).

For further information on conference speakers: driverlesscars.sa.gov.au

Conference Program

Day One – Thursday 5 November 2015

8.00am – 8.45am	Registration	
8.45am – 9.00am	Master of Ceremonies (MC): Dr Paul Willis, Director and Host RIAUS Australia's Science Channel Welcome to Country and didgeridoo performance by Tauondi Aboriginal College	
9.00am – 9.15am	Official opening	Hon Jay Weatherill MP, Premier of South Australia
9.15am – 9.25am	Welcome to Adelaide – smart and connected city	The Right Honourable The Lord Mayor of Adelaide, Martin Haese
9.25am – 10.25am	Keynote Presentations	
	Drive Me – self-driving cars by Volvo	Dr Trent Victor, Senior Technical Leader Crash Avoidance, Volvo Car Corporation, Sweden
	Connected and automated vehicles: Development in the UK	Professor Alan Stevens, Chief Research Scientist, Transport Research Laboratory, and Chairman of Intelligent Transport Systems, United Kingdom
	Self-driving vehicles: The road ahead	Professor Raj Rajkumar, Professor and Co-Director, General Motors-Carnegie Mellon Connected and Autonomous Driving Collaborative Research Laboratory, United States
10.25am – 10.35am	<i>Question and answer session</i>	
10.35am – 10.50am	Morning Break	
10.50am – 11.00am	Australian Driverless Vehicle Initiative (ADVI)	Mr Gerard Waldron, Managing Director, ARRB Group Ltd, Australia
11.00am – 11.20am	Research gaps and work required for Australia	Dr Charles Karl, National Technical Leader, and Adjunct Professor Michael Regan, ARRB Group Ltd, Australia
11.20am – 11.40am	Vehicle technology timeline from automated to driverless	Mr Carl Liersch, General Manager, Engineering, Chassis Control Systems, Bosch Australia
11.40am – 12.00pm	What regulations do driverless vehicles need and what unnecessary red tape could be cut?	Mr Paul Retter, Chief Executive, National Transport Commission
12.00pm – 12.10pm	<i>Question and answer session</i>	
12.10pm – 1.00pm	Lunch	
1.00pm – 1.20pm	Driver behaviour in highly automated vehicles	Professor Oliver Carsten, Professor of Transport Safety, University of Leeds, United Kingdom
1.20pm – 1.40pm	Driverless vehicle philosophical issues	Associate Professor Robert Sparrow, School of Philosophical, Historical and International Studies, Monash University
1.40pm – 2.00pm	Autonomous systems in aviation	Mr Simon Henderson, A330 Fleet Standards Manager, Virgin Australia
2.00pm – 2.10pm	<i>Question and answer session</i>	
2.10pm – 2.25pm	Afternoon Break	
2.25pm – 2.45pm	How will driverless cars impact the design of our cities and homes?	Mr David Homburg, Principal at HASSELL and SA Chapter President of Australian Institute of Architects
2.45pm – 3.05pm	Innovation and engaging the community	Dr Amantha Imber, Innovation Psychologist, Inventium, Melbourne, Australia
3.05pm – 3.25pm	Safety in automation / Safety in design	Ms Wendy Machin, Chair of the Australasian New Car Assessment Program, Deputy President NRMA
3.25pm – 3.35pm	<i>Question and answer session</i>	
3.35pm – 4.30pm	<i>Summary session and interactive expert question and answer session</i>	
4.30pm	End of sessions Walk from Adelaide Convention Centre across the Riverbank Bridge to Adelaide Oval for the RAA cocktail reception	
5.00pm – 7.00pm	RAA cocktail reception – Adelaide Oval	

Day Two – Friday 6 November 2015

8.30am	Registration/refreshments	
9.00am – 9.15am	<i>Welcome</i>	
9.15am – 9.35am	Overview of South Australian on-road driverless vehicle trials planned for 7 November 2015	Mrs Rita Excell, Regional Manager, Australian Driverless Vehicle Initiative, ARRB Group Ltd
9.35am – 9.55am	Tesla autopilot technology	Mr Heath Walker, Marketing and Communications Manager, Tesla
9.55am – 10.15am	NAVYA driverless shuttle	Mr Henri Coron, Business Development Manager, NAVYA, France
10.15pm – 10.25pm	<i>Question and answer session</i>	
10.25am – 10.40am	Morning Break	
10.40am – 11.00am	The future of connected vehicles	Mr Paul Gray, CEO, Cohda Wireless
11.00am – 11.20am	A driverless 2040 vision	Professor Ramayya Krishnan, Dean, Heinz College, Carnegie Mellon University, United States
11.20am – 11.40am	Real world benefits of autonomous vehicle safety systems	Associate Professor Robert Anderson, Hall Technical and Adjunct Senior Research Fellow and Dr Jeremy Woolley, Acting Director, Centre for Automotive Safety Research, The University of Adelaide
11.40am – 12.00pm	The future community changes and benefits of driverless cars	Mr Andrew Somers, Transoptim, Australia
12.00pm – 12.10pm	<i>Question and answer session</i>	
12.10pm – 12.30pm	<i>Conference summary / close</i>	
12.30pm – 1.15pm	Lunch and walk to vehicle demonstrations and exhibitions at the Torrens Parade Ground (refer to map overleaf for directions)	
1.30pm – 4.00pm	<ul style="list-style-type: none"> • Volvo - demonstrations on assisted parking technology that will feature the ability for a vehicle to both reverse parallel park, and exit the parking spot, without control of the driver. • Tesla - demonstrations of autopilot technology. • Bosch - demonstrations that will highlight systems designed to help prevent vehicles reversing over objects. • Cohda Wireless - demonstrating infrastructure mapping technology by taking delegates for short journeys from the Torrens Parade Ground, around the CBD. • The Centre for Automotive Safety Research (CASR) - demonstrations showcasing the technology supporting Autonomous Emergency Braking (AEB). • Flinders University - displaying the Top Cat autonomous catamaran and current research of autonomous vehicles. • ARRB - displaying information on the Australian Driverless Vehicle Initiative. • NAVYA - displaying information on the latest NAVYA autonomous vehicles. • University of NSW - demonstrations of their autonomous vehicle driving simulator. • SAGE - demonstrations of Cooperative Intelligent Transport Systems and autonomous robot technology. 	

First on-road driverless car trials

Saturday 7 November 2015

In collaboration with Volvo and as part of the Australian Driverless Vehicle Initiative, ARRB is bringing together local and international experts to participate in Australia's first on-road demonstration of automated vehicles. Volvo XC90s will demonstrate lane keeping, adaptive cruise control and active queue assist in a fully automated mode. Please note this is a closed event. Access to this event is restricted to media, VIPs and ADVI partners only. Telstra will be livestreaming the demonstrations from inside one of the vehicles through the following website <http://cto.telstra.com/advi/index.html>



Name Badges

All delegates will be issued with a name badge and conference lanyard at registration which must be presented to enter all sessions including the RAA cocktail reception at Adelaide Oval and the vehicle demonstrations at Torrens Parade Ground.

Catering

Morning and afternoon tea breaks and lunches will be held within Hall K on all days of the conference.

Dining

There are many dining options in Adelaide, and a number of restaurants have kindly offered discounts to conference delegates. Go to the conference website www.driverlesscars.sa.gov.au for a map and list of participating restaurants. Please show your conference lanyard to confirm your discount prior to ordering.

Local Transport

Adelaide CBD is well serviced by public transport. Free tram and bus services are available within the CBD.

Bus

The free City Connector (98A, 98C, 99A, 99C) is an easy and comfortable way of getting around the city, taking in many of the main attractions, shopping and dining spots throughout the inner city and North Adelaide.

Trams

Adelaide Metro Trams run from Glenelg to the city (past the Hilton Adelaide Hotel) and to the Adelaide Entertainment Centre, Port Road. Within the CBD between South Terrace and the Entertainment Centre the tram is free. For more information please call +61 8 8210 1000 or visit the website: www.adelaidemetro.com.au

Monday to Friday:

6.00am-7.30pm
(approximately every 15 minutes
Glenelg to City or every 7 minutes
within the CBD)

Saturday, Sunday, Public Holidays:
8.00am-7.30pm
(approx. every 15 minutes)

Other times to approximately
midnight:
Approximately every 20 minutes

Taxis

A taxi from the city to the airport
is approximately \$20.00.

Suburban Taxi: 131 008

Yellow Cabs: 132 227

Adelaide Independent Taxi: 132 211

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