



19 – 22 October 2014
Sydney, Australia



22 -24 October 2014
Sydney, Australia

Program as of 28 August 2014 – subject to change
Venue: ANZ Stadium, Sydney Olympic Park, New South Wales, Australia

Sunday 19 October 2014

Start time	End time	Session	Location
10.00 am	5.00 pm	Technical tour (departs at 10.00 am sharp)	Leaves from ANZ stadium
5.00 pm	6.30 pm	Welcome reception & registration open Sponsored by SIDRA SOLUTIONS 	TBA

Monday 20 October 2014

Start time	End time	Session	Location
8.00 am	9.30 am	Registration & welcoming tea and coffee	Exhibition area (Gold Members Lounge)
9.30 am	11.00 am	<p>Opening Ceremony: Research Driving Efficiency <i>This session is on how research can support doing more with less.</i></p> <p>Road authorities in Australia and New Zealand face a changing and increasingly difficult operating environment. On the demand side – traffic is increasing, freight access demands are growing for higher-productivity vehicles and potentially heavier axle loads, and road users are expecting smooth, incident free and safe travel. While on the supply side – road agency budgets have remained static or declined and many agencies have faced efficiency dividends requiring 20-25% staff reductions.</p> <p>Year on year, budgets are under pressure. In addition, extreme weather events and environmental pressures demand adaptation and network resilience, as well as the increasing use of recycled and reclaimed materials.</p> <p>Keynote speakers include:</p> <ul style="list-style-type: none"> • Professor David Henscher, Director – Institute of Transport and Logistics Studies, The University of Sydney • 2 additional speakers TBA 	Gold Members room
11.00 am	11.30 am	Morning tea	Exhibition area (Gold Members Lounge)

11.30 am – 1.00 pm Parallel technical sessions & workshops 1

1.1 Sprayed seals (Room: Gold Members)	1.2 Unsealed roads & reinforced layers (Room: Ambassadors)	1.3 Network planning 1 (Room: Olympians)	1.4 Safe speeds (Room: Platinum)	1.5 Environmental impact of traffic (Room: Captains)
<p>Model for long term bitumen oxidation Phillip Herrington NEW ZEALAND</p> <p>Preliminary investigations of epoxy bitumen for resilient and sustainable chipseal (sprayed seal) road surfaces Steve Bagshaw AUSTRALIA</p> <p>Design and construction of nonconventional sprayed bituminous surfacing for a remote road network in Western Australia Srijib Chakrabarti AUSTRALIA</p> <p>A review of the loading impacts of heavy vehicles on the Austroads sprayed seal design method Khar Yean Khoo AUSTRALIA</p>	<p>Uncertainty associated with pressure cells and deflection measurements in geocell-reinforced layers Moshe Livneh ISRAEL</p> <p>Developments of Hexahydrated Magnesium Chloride in unpaved roads Alvaro Gonzalez CHILE</p> <p>Performance of low-volume road test sections with wearing course of silty clayey soil modified with lime in Uruguay Leonardo Behak URUGUAY</p> <p>The impact of maintenance on unsealed road performance Melissa Dias AUSTRALIA</p>	<p>Level-of-service framework for network operation planning Ian Espada AUSTRALIA</p> <p>Evaluation and application of transport accessibility measures: a non-metropolitan focus Brett Williams AUSTRALIA</p> <p>Efficiency modelling of bicycle infrastructure Ajit Prabhakar INDIA</p> <p>An innovative methodology for converting axle counts to vehicle counts Young Yoo AUSTRALIA</p>	<p>Improving compliance and acceptance of safer speeds Shane Turner NEW ZEALAND</p> <p>Evaluation of Peninsula SaferSpeeds – speed limit reduction and community perceptions Kate Pratt AUSTRALIA</p> <p>Impact of changes in road speed limits on arterial roads Lay Peng Hau SINGAPORE</p> <p>Model national guidelines for setting speed limits at high-risk locations Chris Jurewicz AUSTRALIA</p>	<p>Estimation of road transport emissions for Australia Robin Smit AUSTRALIA</p> <p>State highway noise mapping – Auckland motorways case study Rob Hannaby NEW ZEALAND</p> <p>Brisbane Airport Link M7 tunnel ventilation system optimisation Bruce Johnson AUSTRALIA</p> <p>The use of GPS and high resolution vehicle emission modelling to assess environmental benefits of driver behaviour change programs Robin Smit AUSTRALIA</p>

1.00 pm	2.00 pm	Lunch	Exhibition area (Gold Members Lounge)	
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2.00 pm – 3.30 pm Parallel technical sessions & workshops 2

2.1 Pavement design & analysis 1 (Room: Gold Members)	2.2 Sustainable asset management (Room: Ambassadors)	2.3 Vehicle telematics & technology (Room: Olympians)	2.4 Road safety risk assessment (Room: Platinum)	2.5 Sprayed Sealing Alliance workshop (Room: Captains)
<p>A holistic approach to flexible pavement design improves performance Bryan Pidwerbesky NEW ZEALAND</p> <p>Influence of multiple-axle group loads on mechanistic design of asphalt pavements Michael Moffatt AUSTRALIA</p> <p>Analytical solution of pavement deflections and its application to the TSD measurements Adam Zofka POLAND</p> <p>APADS: finite element method software for enhanced pavement analysis including nonlinear behaviour of granular materials Didier Bodin AUSTRALIA</p>	<p>Developing a sustainability assessment framework for road transportation asset management practice Prageeth Gunarathna AUSTRALIA</p> <p>Development of the Green Highway Technology Investment Evaluation System (G-TIES) Jongdae Baek REPUBLIC OF KOREA</p> <p>Uptake of green technology through sustainable procurement Simon Renton AUSTRALIA</p>	<p>Australian Cooperative-ITS platform Freek Faber AUSTRALIA</p> <p>Cooperative-ITS interoperability with existing ITS infrastructure David Green AUSTRALIA</p> <p>Electronic Work Diaries: overview and benefits Shaun Talko AUSTRALIA</p> <p>Emerging digital mapping requirements for Cooperative-ITS Clarissa Han AUSTRALIA</p>	<p>Operational safety risk management – are you sure your transport project will operate safely? Ryszard Gorell AUSTRALIA</p> <p>Assessment and treatment of high risk roads in Bangladesh Md. Mazharul Hoque BANGLADESH</p> <p>Main Roads trial of Australian National Risk Assessment Model (ANRAM) Jan Karpinski AUSTRALIA</p> <p>Using Australian National Risk Assessment Model (ANRAM) to improve road safety Chris Jurewicz AUSTRALIA</p>	<p>Initial Seals – their problems and solutions.</p> <p>Many people experience problems with initial seals, particularly with regard to bleeding. But initial seals can also mean different things to different people – such as being a primer seal, or the first seal over a primerseal, or omitting the primerseal altogether before placing the initial seal. The use of initial seals with or without primers and primer seals will be discussed, beginning with experiences from the panel and from the floor. What are the risks, and what is the best way forward?</p>


		Developing a methodology for estimating energy consumption in road construction, maintenance and operation Hyejung Hu REPUBLIC OF KOREA		
3.30 pm	4.00 pm	Afternoon tea		Exhibition area (Gold Members Lounge)
4.00 pm – 5.30 pm Parallel technical sessions & workshops 3				
3.1 Asphalt mix design & performance 1 (Room: Gold Members)	3.2 Road asset management (Room: Ambassadors)	3.3 Transport demand (Room: Olympians)	3.4 Implementation of ANRAM workshop (Room: Platinum)	3.5 Special session: using ICT to improve traffic management (Room: Captains)
<p>Comparison between resilient modulus and dynamic modulus of Western Australian hot mix asphalt based on flexible pavement design perspectives Sarayoot Kumlai AUSTRALIA</p> <p>Stiffness variability of multigrade asphalt in Brisbane Laszlo Petho AUSTRALIA</p> <p>Fourier transform infrared spectroscopy: a tool for detection of lime content in hot mix asphalt Satish Pandey INDIA</p> <p>Asphalt moisture-sensitivity assessment in Australia using the Hamburg Wheel Tracking Device (HWTD) Andrew Beecroft AUSTRALIA</p>	<p>Asset management as a means to assist in the delivery of road safety outcomes Tyrone Toole AUSTRALIA</p> <p>Practical condition deterioration from historic data for asset management Manish Jethwa UNITED KINGDOM</p> <p>The challenges and opportunities of managing a road maintenance backlog, Main Roads Western Australia's experience Flori Mihai AUSTRALIA</p> <p>Rebuilding Fiji's road industry Bruce Buxton NEW ZEALAND</p>	<p>Calculation of transport mode shift in the absence of complex transport models Wayne Davies AUSTRALIA</p> <p>Effect of traffic mix on capacity of urban arterial roads Satish Chandra INDIA</p> <p>Adverse weather effects on bus ridership Syeed Kashfi AUSTRALIA</p> <p>Estimating travel times for light rail using a probabilistic method Andrew Somers AUSTRALIA</p>	<p>The Australian National Risk Assessment Model (ANRAM) was released earlier this year. ANRAM aims to help road agencies identify, measure and report severe crash risk across all parts of the road network, and then manage this risk through development of treatment programs.</p> <p>This workshop will include a discussion about experiences to date on those who have implemented trials of ANRAM.</p> <p>The workshop will also feature a discussion on future versions of ANRAM, including identification of features and functions that may be useful.</p> <p>This workshop is aimed at Australian state and local road agency practitioners.</p>	<p>Speakers include:</p> <p>Mr John Doyle Auditor-General Victorian Auditor-Generals Office</p>
7.00 pm	11.00 pm	<p>26th ARRB Conference Official Dinner</p> <p>The venue for this year's conference Gala Dinner is the Sydney Olympic Park Aquatic Centre, Olympic Boulevard. The price is inclusive of dinner, drinks (beer, wine & soft drinks), entertainment & the bus for the short trip from the conference venue (ANZ Stadium).</p> <p>The Sydney Olympic Park Aquatic Centre was the venue for Sydney 2000 Olympic and Paralympic Games. Join us for our Conference Gala Dinner at this unique location.</p> <p>Attendee ticket: \$132 Additional partner ticket: \$165</p>		

Tuesday 21 October 2014

Start time	End time	Session	Location	
8.00 am	8.45 am	Registration & welcoming tea and coffee	Exhibition area (Gold Members Lounge)	
8.45 am	10.30 am	<p>Plenary session: Data: big, open and managed for all</p> <p>The volume, velocity and variety of data that can be accessed by organisations is growing. Member agencies face unprecedented rapid developments in data management. Leading global corporations are exploring and developing big data from digital connectivity on an international scale. Governments are increasingly releasing data for open development. What opportunities do these offer road and transport agencies? How can data be managed, manipulated and developed into products and services for road users and government agencies? This is an exploration of the forward outlook across agency operations.</p> <p>Plenary speakers include:</p> <ul style="list-style-type: none"> • Ms Birgitta Sandstedt, Director, Library and Information Centre VTI Sweden • Mr Rohan Fernando, Enterprise Business Development - Oceania HERE, a Nokia company, Australia • Mr Ian Webb, Chief Executive Roads Australia • Plus a special pre-recorded presentation from Ms Pia Waugh, Director Coordination and Gov 2.0, Commonwealth Department of Finance, Australia 	Gold Members room	
10.30 am	11.00 am	Morning tea	Exhibition area (Gold Members Lounge)	
11.00 am – 12.30 pm Parallel technical sessions & workshops 4				
4.1 Asphalt mix design & performance 2 (Room: Gold Members)	4.2 Asset performance measurement (Room: Ambassadors)	4.3 Network planning 2 (Room: Olympians)	4.4 Vehicle crashes & the safe system (Room: Platinum)	4.5 Introducing the Transport Infrastructure Product Evaluation Scheme (TIPES) workshop (Room: Captains)
<p>Asphalt fatigue performance criteria for the National War Memorial Park Anthony Stubbs NEW ZEALAND</p> <p>Estimation of dynamic modulus values of bituminous mixes from repeated indirect tensile test Bharath Gottumukkala INDIA</p> <p>Prediction of crack propagation phenomenon in asphalt mixtures Krishna Prapoorna Biligiri INDIA</p>	<p>Monitoring ride quality on roads with existing sensors in passenger cars Philippe Nitsche AUSTRIA</p> <p>Seasonal variation in skid resistance of South Australian aggregates Hugo van Loon AUSTRALIA</p> <p>Formulating the South Australian automatic crack data processing methodology Jasmina Copcic AUSTRALIA</p>	<p>Vulnerability assessment of a strategic rural road network using a prototype method Vaughn Scott NEW ZEALAND</p> <p>Road safety and transport planning decision making and the impact on community, economy and the environment Jayantha Withanaarachchi AUSTRALIA</p> <p>Economic evaluation of travel time reliability in road project planning: a practitioner's perspective Baojin Wang AUSTRALIA</p>	<p>Using driver errors to inform safe system infrastructure development Paul Roberts AUSTRALIA</p> <p>Vehicle crash types and the ability of road safety simulation models to replicate them Bill Young AUSTRALIA</p> <p>The Safe System approach in NSW: how are we traveling? David Beck AUSTRALIA</p>	<p>The Transport Infrastructure Product Evaluation Scheme (TIPES) is a process aimed at providing an independent fit-for-purpose assessment of innovative road construction products. TIPES is intended for the evaluation of products that fall outside the scope of established standards and specifications.</p> <p>TIPES is a national scheme endorsed by all Australian State and Territory road agencies as well as IPWEA (QLD) and the Queensland Local Roads Alliance.</p>

Effect of gyration angle, ram pressure and number of gyration on the volumetric and mechanical properties of hot mix asphalts Mofreh Saleh NEW ZEALAND		Preliminary field validation of the updated Traffic Speed Deflectometer (TSD) device Wayne Muller AUSTRALIA	Factors influencing public acceptance of congestion pricing in Melbourne Xiaoying Cao AUSTRALIA	Network management and the forecast of accident blackspot locations Julian Laufer AUSTRALIA Is road infrastructure that improves operating speed a double-edged sword when it comes to road safety? Wayne Davies AUSTRALIA	
12.30 pm	1.30 pm	Lunch			Exhibition area (Gold Members Lounge)
1.30 pm – 3.00 pm Parallel technical sessions & workshops 5					
5.1 Granular pavements & water management (Room: Gold Members)		5.2 Research needs in road infrastructure management workshop (Room: Ambassadors)	5.3 Latest practices and developments in traffic signal control workshop (part 1) (Room: Olympians)	5.4 Traffic management & work zones (Room: Platinum)	5.5 Heavy vehicles workshop: PBS route assessment tool (Room: Captains)
<p>Heavy-duty unbound granular pavements: an example of best practice in Queensland Jonathon Griffin AUSTRALIA</p> <p>Managing the risks of using seawater for pavement construction Kym Neaylon AUSTRALIA</p> <p>Time domain reflectometry (TDR) based moisture monitoring system for unbound granular pavements Will Hore-Lacy AUSTRALIA</p> <p>A review of the structural performance of flooded pavements Masuda Sultana AUSTRALIA</p>		<p>The Road Infrastructure Workshop is tailored for both researchers and practitioners to develop and confirm the broad research themes in road infrastructure management that will serve practitioners in the medium to long term. From these research themes a series of research proposals will be developed in outline and prioritised on the basis of their contribution to the efficient practice of road infrastructure management. In addition, areas requiring better knowledge management and dissemination will also be identified.</p> <p>These research proposals can form the basis for future co-ordinated long term research program for Austroads ATF Research Program and the road agencies such as QTMR and MRWA. This broad co-ordinated approach will ensure that no duplication of research occurs and that the research proposals have strong support from practitioners.</p>	<p>The workshop will cover the latest practices and developments in traffic signal control in Australia.</p> <ol style="list-style-type: none"> 1. Performance and Data 2. How traffic systems will fit into C-ITS 3. Planning for Operations (smart roads) - how it should drive traffic operational strategies 4. Traffic operational strategies (gating/metering etc.) 5. Developments across the STREAMS/SCATS port 6. Benefits of conducting regular reviews of traffic signal operation 7. Managing traffic signal operation using SmartRoads 8. Managing traffic signal operation in congested environments. 	<p>Expanded warrants for unsignalised intersection turn treatments Owen Arndt AUSTRALIA</p> <p>Public opinion survey for evaluation of traffic calming prioritisation process Farzana Rahman BANGLADESH</p> <p>Making informed decisions on selecting promising work zone safety treatments Ashim Kumar Debnath AUSTRALIA</p> <p>Innovative work zone traffic management using real-time GPS probe data Kamal Weeratunga AUSTRALIA</p>	
3.00 pm	3.30 pm	Afternoon tea			Exhibition area (Gold Members Lounge)

3.30 pm – 5.00 pm Parallel technical sessions & workshops 6

6.1 Pavement design & analysis 2 (Room: Gold Members)	6.2 Infrastructure economics (Room: Ambassadors)	6.3 Latest practices and developments in traffic signal control workshop (part 2) (Room: Olympians)	6.4 Are we letting an opportunity slip by? – future directions in skid resistance management (Room: Platinum)	6.5 Workshop TBA (Room: Captains)
<p>Improved fatigue characterisation of cemented materials Geoffrey Jameson AUSTRALIA</p> <p>Analytical solution for the heat propagation with infinite speed in the multilayer pavement system Adam Zofka POLAND</p> <p>Development of a validated long life pavement threshold criterion for Australian asphalt pavement design Bevan Sullivan NEW ZEALAND</p>	<p>Calculating the cost of road wear on local roads Mark Bondiotti AUSTRALIA</p> <p>Input price indexes for arterial and local roads: a methodology and results Bryan Lee AUSTRALIA</p> <p>A life cycle cost analysis case study - M80 Ring Road upgrade project Nayana Weerakkody AUSTRALIA</p> <p>ITS procurement methods and a proposed decision model Clarissa Han AUSTRALIA</p>	<p>The workshop will cover the latest practices and developments in traffic signal control in Australia.</p> <ol style="list-style-type: none"> 1. Performance and Data 2. How traffic systems will fit into C-ITS 3. Planning for Operations (smart roads) - how it should drive traffic operational strategies 4. Traffic operational strategies (gating/metering etc.) 5. Developments across the STREAMS/SCATS port 6. Benefits of conducting regular reviews of traffic signal operation 7. Managing traffic signal operation using SmartRoads 8. Managing traffic signal operation in congested environments. 	<p>This workshop will introduce and seek delegate comments and opinions on the latest issues and challenges with respect to skid resistance management. Four short presentations will be followed by a rotation of topics for discussion. Feedback from the respective discussion groups will be collated by the workshop facilitators. It is intended that a record of the workshop be prepared for general publication and possibly used to support a future submission to the Austroads research program.</p>	
6.00 pm	9.00 pm	<p>26th ARRB Conference Networking Function</p> <p>Enjoy a three hour Sydney harbour cruise departing Homebush Bay public wharf at 6.00pm (complimentary buses provided from the conference venue ANZ Stadium to wharf & return - this is just a 5 minute bus trip). Cruise concludes back at Homebush Bay at 9.00pm.</p> <p>This function provides a great opportunity for delegates to network with each other, aboard a wonderful vessel and also viewing iconic Sydney landmarks!</p> <p>Attendee ticket: \$66 Additional partner ticket: \$88</p> 		
3.30 pm	5.30 pm	<p>Welcome Reception TBA Registration open for 9th Austroads Bridge Conference delegates</p>		

Wednesday 22 October 2014 (Joint conference day)

26th ARRB Conference and the 9th Austroads Bridge Conference

Start time	End time	Session	Location		
8.00 am	9.00 am	Registration & welcoming tea and coffee	Exhibition area (Gold Members Lounge)		
ARRB Conference			Bridge Conference		
9.00 am – 10.30 am Parallel technical sessions & workshops 7			9.00 am – 10.30 am 9 th Austroads Bridge Conference opening & keynote address Gold Members room		
7.1 Road surfacings (Room: Captains)	7.2 Asset management systems (Room: Ambassadors)	7.3 Traffic modelling (Room: Olympians)	7.4 Design & management of rural roads (Room: Platinum)	7.5 Austroads pavement design future directions forum (Room: Victory)	9.00 am – 9.15 am Opening and welcome
<p>Asphalt trials to reduce traffic noise levels Cassandra Simpson AUSTRALIA</p> <p>Construction of test sections to evaluate performance of porous asphalt concrete Jian-Shiuh Chen TAIWAN</p> <p>Microsurfacing Suspended Fibre Technology – product innovation Paul Price AUSTRALIA</p>	<p>Development and implementation of a pavement asset management system (PAMS) at Roads and Maritime Services NSW – the journey so far Riaz Ul-Islam AUSTRALIA</p> <p>On The RADAR, at Main Roads Western Australia, a journey for modernising the collection and management of road maintenance information Flori Mihai AUSTRALIA</p> <p>Investigating the appropriate level of management system functionality for various road infrastructure assets Riaz Ul-Islam AUSTRALIA</p>	<p>Scenarios demonstrating congestion management policies using SCATS: stage 2 Christian Chong-White AUSTRALIA</p> <p>Design criteria for permissive only and protected permitted left turns (US) Essam Radwan UNITED STATES</p> <p>A new lane-based model for platoon patterns at closely-spaced signalised intersections Rahmi Akçelik AUSTRALIA</p> <p>Automatic discrimination of traffic conflicts during lane changing manoeuvres Xiaoying Cao AUSTRALIA</p> <p>Performance of unsignalised intersections based on capacity and conflict streams Joewono Prasetijo MALAYSIA</p>	<p>Expanded operating speed model Michael Levasseur AUSTRALIA</p> <p>Safe passing as a measure to improve road safety on rural roads in Germany Thomas Jaehrig GERMANY</p> <p>Evaluating vehicle activated signs on rural roads Tariro Makwasha AUSTRALIA</p> <p>Visitors acuity of tourism signs in Victoria Tapash Saha AUSTRALIA</p>	<p>Research findings in the relation to:</p> <ul style="list-style-type: none"> • Introduction of Austroads research funding and overview of proposed changes to Austroads Guide • The effects of multiple-axle loads on pavement damage • Improved characterisation of cemented materials • Development of a non-linear finite element model. <p>To enable the implementation of these findings, the proposed AustPads software will be demonstrated.</p>	<p>9.15 am – 10.30 am Keynote address: Professor Dan M. Frangopol, Fazlur R. Khan Endowed Chair of Structural Engineering and Architecture at Lehigh University, USA</p>
10.30 am	11.00 am	Morning tea	Exhibition area (Gold Members Lounge)		

11.00 am – 12.30 pm Parallel technical sessions & workshops

ARRB Conference

Bridge Conference

11.00 am – 12.30 pm Parallel technical sessions & workshops
8

11.00 am – 12.30 pm Parallel technical sessions 1

8.1 Pavement recycling & foamed bitumen (Room: Captains)	8.2 Asset management modelling (Room: Ambassadors)	8.3 Managed motorways & heavy vehicles (Room: Olympians)	1.1 Design 1 (Regional Rail Link) (Room: Gold Members)	1.2 Construction & Strengthening 1 (Room: Platinum)	1.3 Assessment & Investigation 1 (Room: Victory)
<p>Comparison of four full depth reclamation strategies in an accelerated loading test David Jones UNITED STATES</p> <p>Evaluation of strength characteristics of recycled asphalt pavement materials Phillip Neumann AUSTRALIA</p> <p>Effect of foamed bitumen content in laboratory tests Alvaro Gonzalez CHILE</p> <p>Performance of foam bitumen stabilised (FBS) pavements in New Zealand Josh von Pein NEW ZEALAND</p>	<p>Incorporating uncertainty in pavement performance modelling Peter Kadar AUSTRALIA</p> <p>Distress based pavement performance prediction models Maher Mahmood UNITED KINGDOM</p> <p>Pavement condition modelling by using surface condition data – A VicRoads Study Oliver Lin AUSTRALIA</p> <p>Optimal life-cycle modelling in pavement analysis Manish Jethwa UNITED KINGDOM</p>	<p>Operational management of arterial/managed motorway interfaces for network optimisation Paul Bennett AUSTRALIA</p> <p>Kwinana Freeway all lane running sign comprehension study Katharine Boddington AUSTRALIA</p> <p>Using the fundamental diagram to monitor travel times and motorway performance: methodology & case study David Shteinman AUSTRALIA</p> <p>Modular AB-Triples: Australia's next generation of very high productivity freight vehicles Andrej Bucko AUSTRALIA</p>	<p>Regional Rail Link work package E, road bridges, Victoria Chee Yong Ng AUSTRALIA</p> <p>Fatigue-detailing of skewed steel-through-girder rail bridges: Regional Rail Project, Melbourne Bruce Gibbens AUSTRALIA</p> <p>Steel truss road bridges on Regional Rail Link Bruce Gibbens AUSTRALIA</p> <p>Pedestrian bridges on Regional Rail Link Joakim Duplex AUSTRALIA</p>	<p>The Newmarket Viaduct replacement project experience Ted Polley NEW ZEALAND</p> <p>Experimental testing of emulative connections for accelerated bridge construction in seismic areas Mustafa Mashal NEW ZEALAND</p> <p>Hendon Park pedestrian bridge - a bridge for the future Will Pank NEW ZEALAND</p> <p>West Gate Bridge - fatigue cracking Javier Silla-Sanchez AUSTRALIA</p>	<p>Structural assessment of freight bridges in Queensland Ross Pritchard AUSTRALIA</p> <p>Rapid structural assessment of bridges for access by heavy vehicles Rob Heywood AUSTRALIA</p> <p>Bridge analysis - are we engineers or data managers? Peter Shaw AUSTRALIA</p> <p>Movable span bridges of NSW; a new classification system Ian Berger AUSTRALIA</p>

12.30 pm	1.30 pm	Lunch	Exhibition area (Gold Members Lounge)		
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ARRB Conference

Bridge Conference

1.30 pm – 4.15 pm Special session
Gold Members room

1.30 pm – 3.00 pm Parallel technical sessions 2

<p>The future of our cities – enabling driverless cars</p> <p>1.30 pm – 3.00 pm Five thought provoking presentations</p> <ol style="list-style-type: none"> City and urban planning – what are the impacts and enabling mechanisms? Speaker: Mr Garry Bowditch CEO SMART Infrastructure facility The University of Wollongong Emerging issues – an international perspective Driverless cars – an industry perspective 	2.1 Design 2 (M80 Ring Road Upgrade) (Room: Ambassadors)	2.2 Construction & Strengthening 2 (Room: Olympians)	2.3 Life Cycle Management 1 (Room: Platinum)
		<p>Engineering challenges faced during widening, strengthening and underpinning of bridges - M80 Ring Road Upgrade, Victoria Justin Arifin AUSTRALIA</p> <p>M80 Ring Road Upgrade-widening of bridge over Furlong Road Kabir Patoary AUSTRALIA</p>	<p>Design and construction of Omega Bridge, Gerringong David Hicks AUSTRALIA</p> <p>Constructability considerations in long span bridge design Mike Tapley HONG KONG</p>

<p>4. Driverless cars – an agency perspective</p> <p>5. Driverless cars – a community perspective</p> <p>Speaker: Ms Penny Gale General Manager, Public Affairs Royal Automobile Association of South Australia</p> <p>3.00 pm – 3.30 pm Afternoon tea served in Exhibition area</p> <p>3.30 pm – 4.15 pm Q&A panel discussion</p>	<p>Incorporating ACI440.8 into AS5100.5 for FRP strengthening via M80 Upgrade Project case study Liam Ingram AUSTRALIA</p> <p>Antigua Street Footbridge earthquake recovery and refurbishment Jeremy Jennings NEW ZEALAND</p>	<p>Deck widening stitch pours under live traffic Matthew Deery AUSTRALIA</p> <p>West Gate Bridge - maintenance of demag joint and roller bearings Javier Silla-Sanchez AUSTRALIA</p>	<p>Flood resilient bridge design; case-studies from challenging design environments Cherry Fulmer AUSTRALIA</p> <p>Sustainable management of installation of impressed current cathodic protection projects for bridges of the future Ram Ramanan AUSTRALIA</p>	
	3.00 pm	3.30 pm	Afternoon Tea	Exhibition area (Gold Members Lounge)
	3.30 pm – 5.00 pm Parallel technical sessions 3			
	3.1 Design 3 (Room: Ambassadors)	3.2 Standards & Specifications 1 (Room: Olympians)	3.3 Assessment & Investigation 2 (Room: Platinum)	
	<p>Namoi Floodplain Viaduct – design of a 1km rail viaduct in a remote area for a 35 year design life Dennis Gunaseelan AUSTRALIA</p> <p>Rail bridges for the Richlands to Springfield project Brendan Ryan AUSTRALIA</p> <p>Three rail bridges, Rangiriri, Waikato, New Zealand John McNeil NEW ZEALAND</p> <p>Metro Train Melbourne bridge renewal works - Victoria Street and Langridge Street bridge replacement, North Richmond. Sleiman Mikhael AUSTRALIA</p> <p>Menangle Bridge - maintaining an aged structure into the future Matthew Ing AUSTRALIA</p>	<p>A quantitative assessment for pier collision loads to AS 5100 David Taylor AUSTRALIA</p> <p>Rational effect of 'Crack control measures in AS5100.5' for partially prestressed composite concrete beam Hari Pokharel AUSTRALIA</p> <p>Safety in design for railway bridges - new provisions in AS5100-2014 Frank Rapattoni AUSTRALIA</p> <p>A new vehicle loading standard for road bridges in New Zealand Ken Wheeler AUSTRALIA</p> <p>Wentworth Bridge liftspan upgrade Alan Pottie AUSTRALIA</p>	<p>ANZAC cable stayed bridge health monitoring Vivek Gupta AUSTRALIA</p> <p>Climbing robot for steel bridge Inspection: engineering challenges Peter Ward AUSTRALIA</p> <p>Structural health monitoring in civil structures based on the time series analysis Samir Mustapha AUSTRALIA</p> <p>West Gate Bridge - mobile bridge inspection platform Dimi Polymenakos AUSTRALIA</p> <p>Potential framework for the nationwide assessment of heavy vehicle access to bridges Neal Lake AUSTRALIA</p>	
4.15 pm – 4.45 pm ARRB Conference close	5.00 pm Day 1 Bridge Conference close			



Thursday 23 October 2014

Start time	End time	Session	Location
8.00 am	9.00 am	Registration & welcoming tea and coffee	Exhibition area (Gold Members Lounge)
9.00 am	10.00 am	<p>Plenary session:</p> <p>Speaker: Dr Amir Fam, Professor and Canada Research Chair in Innovative and Retrofitted Structures (2003-13) and Undergraduate Chair in the Department of Civil Engineering at Queen's University, CANADA</p> <p>Topic: Stay-In-Place (SIP) formwork systems are widely used for concrete slabs in industry due to their relative ease and speed of construction. Conventionally, corrugated metal sheets or precast panels are used as formwork. In recent years, the SIP formwork technique has been proposed in conjunction with Fiber Reinforced Polymer (FRP) composites.</p>	Gold Members room
10.00 am	10.30 am	Morning tea	Exhibition area (Gold Members Lounge)

10.30 am – 12.00 pm Parallel technical sessions 4

4.1 Design 4 (Room: Gold Members)	4.2 AS5100 1 (Room: Ambassadors)	4.3 Assessment & Investigation 3 (Room: Olympians)	4.4 Life Cycle Management 2 (Room: Victory)
<p>Launch of twin steel bridges over Australia's second busiest rail corridor - temporary works design Tom Sheasby AUSTRALIA</p> <p>Safe design - robust and practical temporary propping of Super-T girders Adam McManus AUSTRALIA</p> <p>Integral Super-T bridges - pushing the limits Andrew Dickson NEW ZEALAND</p> <p>Design and construction of twin composite steel box girder bridges over Minmi Creek - Hunter Expressway Alliance Andrew Pau AUSTRALIA</p>	<p>Review of the Bridge Design Code (AS5100) Part 1 - scope and general principles Nigel Powers AUSTRALIA</p> <p>Review of the Bridge Design Code (AS5100) Part 2 - design loads Nigel Powers AUSTRALIA</p> <p>The revision of AS5100.4 bearings and deck joints Mark Bennett AUSTRALIA</p> <p>The new AS 5100 - Part 5: concrete John Hilton AUSTRALIA</p>	<p>ANZAC Bridge maintenance project - bridge specific assessment of live load Nathan Roberts AUSTRALIA</p> <p>Assessment and strengthening of existing bridges to carry increased vehicle weights in New Zealand Andrew Ball NEW ZEALAND</p> <p>Condition assessment and load rating of Arched Bailey Bridge Guvant Vaghela AUSTRALIA</p> <p>Seismic assessment and strengthening of reinforced earth bridge abutment and approach walls John Wood NEW ZEALAND</p>	<p>A decision support model for bridge maintenance Maria Rashidi AUSTRALIA</p> <p>A new future - upgrading bridges for high productivity motor vehicles in New Zealand John Reynolds NEW ZEALAND</p> <p>Additional benefits in project selection and prioritisation for a rural bridge options analysis Mark Best AUSTRALIA</p> <p>An agent-based approach for improved strategic bridge asset management Simon Bush NEW ZEALAND</p>

12.00 pm	1.00 pm	Lunch	Exhibition area (Gold Members Lounge)
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1.00 pm – 3.00 pm Parallel technical sessions 5

5.1 Design 5 (Room: Gold Members)		5.2 AS5100 2 (Room: Ambassadors)	5.3 Assessment & Investigation 4 (Room: Olympians)	5.4 Design 6 (Room: Victory)
<p>The incremental launching of Beauharnois Bridge Alejandro Acerete SPAIN</p> <p>An overview of structural designs in the gateway WA project Graeme Dundas AUSTRALIA</p> <p>Bridge widening on Auckland's causeway upgrade' Paul Corbett NEW ZEALAND</p> <p>Design and construction of the South Road Superway Liam Donnelly AUSTRALIA</p> <p>Design and construction of New Zealand National War Memorial Park and underpass Andre de Groot NEW ZEALAND</p>		<p>The new joint Australian and New Zealand bridge design standard AS/NZS 5100 - Part 6: steel and composite construction Stephen Hicks NEW ZEALAND</p> <p>AS5100.7 updating from bridge rating to bridge assessment Ross Pritchard AUSTRALIA</p> <p>The new AS 5100 - Part 8: rehabilitation and strengthening John Hilton AUSTRALIA</p> <p>The new Australian Standard AS 5100 - Part 9: timber bridges Amie Nicholas AUSTRALIA</p> <p>Guidelines for Standardised Bridge Barrier Designs Rudolph Kotze AUSTRALIA</p>	<p>An investigation into graphitic corrosion of cast iron bridge piers Philip Karajayli AUSTRALIA</p> <p>Life extension of aging railway bridges - a case study of the Burnett River Bridge Ross Emslie AUSTRALIA</p> <p>Queen Street Bridge over Laverton Creek condition assessment and rehabilitation using encased sacrificial anodes and monitoring of performance Fred Andrews-Phaedonos AUSTRALIA</p> <p>Stingray Creek Bridge condition assessment Devin Wardrill AUSTRALIA</p> <p>New fatigue design criteria for New Zealand road bridges Mike Beamish NEW ZEALAND</p>	<p>Improving Victoria's rail network through Innovative structural design Jonathan Lam AUSTRALIA</p> <p>Goodwood junction rail grade separation - collaborative D&C success Brett Jennings AUSTRALIA</p> <p>Kaituna River Bridge - design case study Liam Edwards NEW ZEALAND</p> <p>Karapiro Gully Bridge - design case study Liam Edwards NEW ZEALAND</p> <p>Inelastic displacement-based seismic design of balanced cantilever bridges with mid-length joints Bruce Gibbens AUSTRALIA</p>
3.00 pm	3.30 pm	Afternoon tea		Exhibition area (Gold Members Lounge)
3.30 pm – 5.30 pm Parallel technical sessions 6				
6.1 Design 7 (Room: Gold Members)		6.2 Standards & Specifications 2 (Room: Ambassadors)	6.3 Design 8 (Room: Olympians)	6.4 Life Cycle Management 3 (Room: Victory)
<p>MacKays to Peka Peka expressway bridges - advanced seismic design in a challenging seismic and geotechnical environment Jamil Khan NEW ZEALAND</p> <p>Installation of vehicle restraint systems (VRS) on bridges: European current developments applied on a common Australian VRS Joseph Marra BELGIUM</p> <p>Distribution of wheel loads on Buried Arch Structures Doug Jenkins AUSTRALIA</p> <p>Application of new seismic design rules to Australian bridges Samia Sedra AUSTRALIA</p> <p>Coonamit Bridge rehabilitation Syed Nowmani AUSTRALIA</p>		<p>Changes in the standards for managing corrosion of the bridges in future Narendra Tripathi AUSTRALIA</p> <p>Restoration of scoured out bridge foundations and approaches - a Queensland Department of Transport and Main Roads (QDTMR) perspective Lambert Ezeajugh AUSTRALIA</p> <p>Specification and use of geopolymer concrete Fred Andrews-Phaedonos AUSTRALIA</p> <p>The NZTA bridge painting guide Willie Mandeno NEW ZEALAND</p>	<p>Adelaide's Riverbank Footbridge Harry Turner AUSTRALIA</p> <p>Westgate Footbridge, Auckland, New Zealand John McNeil NEW ZEALAND</p> <p>Cape Preston Creek Bridge over environmentally sensitive tidal mudflats. Andreas Kerkovius AUSTRALIA</p> <p>Modular joint testing for the Hunter Expressway Eric Ancich AUSTRALIA</p> <p>Rehabilitation of Peats Ferry Bridges Scott MacDonald AUSTRALIA</p>	<p>Building bridges, building communities Jacqueline Bell NEW ZEALAND</p> <p>Life cycle management of bridges and bridge networks Barry Wright NEW ZEALAND</p> <p>Management of post flood damage bridges Muhammad Khattak AUSTRALIA</p> <p>Strategic review of flood impact on Victorian structures Nigel Powers AUSTRALIA</p> <p>Auckland Harbour Bridge: Meeting environmental challenges sustainably David Greig NEW ZEALAND</p>

7.00 pm	11.00 pm	<p>9th Austroads Conference Official Dinner Luna Park Sydney Come & join us for a very special evening commencing with pre-dinner drinks on-board the "MV Lady Rose" cruise boat for a scenic trip to our dinner destination Luna Park Sydney.</p> <p>Luna Park Sydney is an Australian icon in a prime Sydney CBD location on the foreshore of Sydney Harbour. With spectacular and uninterrupted views of the Sydney Harbour Bridge, Sydney Opera House and the city skyline Luna Park offers a picture perfect backdrop for our Bridge Conference dinner.</p> <p>* Ticket price includes return boat transfers, pre-dinner drinks, three course dinner & entertainment.</p> <p>Attendee ticket: \$132 Additional partner ticket: \$165</p>
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Friday 24 October 2014

Start time	End time	Session	Location
8.00 am	9.00 am	Registration & welcoming tea and coffee	Exhibition area (Gold Members Lounge)
9.00 am	10.00 am	Plenary session: Dr Riadh Al-Mahaidi , Professor of Structural Engineering, Director of the Smart Structures Laboratory, Swinburne University of Technology, Melbourne, AUSTRALIA	Gold Members room
10.00 am	10.30 am	Morning tea	Exhibition area (Gold Members Lounge)

10.30 am – 12.00 pm Parallel technical sessions 7

7.1 Design 9 (Room: Gold Members)	7.2 Standards & Specifications 3 (Room: Ambassadors)	7.3 Innovation & Research (Room: Olympians)	7.4 Maintenance & Rehabilitation (Room: Victory)
<p>Lengthening of bridges for the Southern Expressway duplication and challenges faced in the design and construction Tim Warren AUSTRALIA</p> <p>Influence of substructure properties on analysis and design of seismically-isolated bridges Moustafa Al-Ani NEW ZEALAND</p> <p>The design of bridges for liquefaction and lateral spreading effects Alexei Murashev NEW ZEALAND</p> <p>Assessment of current design requirements for FRP shear strengthened bridge structures Yew-Chin Koay AUSTRALIA</p>	<p>Dynamic vehicle bridge interactions Torill Pape AUSTRALIA</p> <p>Load testing in-service monitoring of transversely stressed deck unit bridges Hanson Ngo AUSTRALIA</p> <p>A comparison between the technical specifications for elastomeric seismic protection bearings in European norm EN 15129, international standard ISO 22762. Moustafa Imam CHINA</p> <p>Establishing compliance of steel mill products - a comparison between Australian steel standards and the corresponding American standards Hamid Fatemi-Nayeri AUSTRALIA</p>	<p>What now for bridges? Gareth Collins AUSTRALIA</p> <p>Importance of reactive SiO₂, Al₂O₃ and Na₂O in geopolymer formation Chandani Tennakoon AUSTRALIA</p> <p>Influence of placement method to In-place concrete hardened properties on deep foundation using self-compacting concrete Huber Madrio AUSTRALIA</p> <p>Assessment of chloride ingress in concrete exposed to brackish water Radhe Khatri AUSTRALIA</p>	<p>An innovative construction technique for extensions to existing reinforced earth retaining walls. Southern Expressway duplication in Adelaide (Australia) Antonio Ramirez AUSTRALIA</p> <p>Design of an innovative support scheme to strengthen Tarban Creek Bridge at Hunters Hill in Sydney Salah Assi AUSTRALIA</p> <p>Strategy for retrofit-upgrading of sub-standard bridge barriers Vince Colosimo AUSTRALIA</p> <p>Underpinning abutments founded on reinforced soil walls - a novel approach Gareth Jelenich AUSTRALIA</p>
12.00 pm	1.00 pm	Lunch	Exhibition area (Gold Members Lounge)

1.00 pm – 2.30 pm Special technical session 8

8.1 Gold Members room

International Association for Bridge Maintenance and Safety (IAMBAS) special session

We welcome special guest speakers from IAMBAS to present latest research and innovation:

Session Chair: Professor Dan M. Frangopol

1. Long term performance of concrete bridges under extreme events

Speaker: Professor Mitsuyoshi Akiyama, Professor of Civil Engineering, Waseda University, JAPAN

2. Time-variant performance indicators for concrete bridges exposed to corrosion

Speaker: Professor Fabio Biondini, Associate Professor of Structural Engineering, Politecnico di Milano, ITALY

3. Life-cycle management of bridges based on robustness to deterioration

Speaker: Professor Joan R. Casas, Professor of Bridge Engineering, Technical University of Catalunya (UPC-BarcelonaTech), SPAIN

2.30 pm	3.30 pm	Closing ceremony	Gold Members room
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Saturday 25 October 2014

Start time	End time	Session	Location
10.00 am	5.00 pm	Technical tour (departs at 10.00 am sharp)	TBA