



ARSC2017 Symposium Program

As part of the program for ARSC2017, and thanks to the high level of interest from the road safety community, we are delighted to present a **strong program of symposia aimed at expediting road trauma reduction both regionally and internationally.**

Symposium sessions are each programmed to run for 90 minutes (except for two symposia that have been accepted for double-length sessions) and will typically include 3-4 speakers who cover a particular theme. Speakers are hand-picked by each symposium organiser to provide all delegates with an engaging and educational experience.

A selection of symposia accepted for presentation at ARSC2017 includes the following:

1. **Heavy Vehicle Safety**
2. Developments in **motorcyclist training, licensing and PPE research and implementation:** Presentations and jurisdictional discussion panel (**Double Session**)
3. **Australia's collaborative journey to safer roads** by understanding risk
4. **Implementing roads for Safe Systems** – An exploration of approaches used in Australia and New Zealand
5. **Australian naturalistic driving and cycling Symposium (Double Session)**
6. Gruen Transfer: **The Road Safety Pitch** – Safe Together
7. **Motorcycle safety research in low and middle-income countries:** Different approaches to generate an evidence base
8. **Road Safety challenges in Low and Middle Income Countries**
9. **Driver education and training:** An interactive workshop for safer drivers
10. **Community-based road safety programs in low and middle-income countries:** Success and sustainability
11. Is there space for **Safe System within the Movement and Place philosophy?**

1. Heavy Vehicle Safety Symposium

Organiser: **Mr Lauchlan McIntosh AM FACRS**

Email: Lauchlan.mcintosh@bigpond.com

Heavy vehicle operators face a raft of legislative and accreditation programs to ensure safe operations. Many factors impact on safe operation from the obvious driver skill to vehicle capability and condition. The operating environment influenced by the road, mixed traffic, technology, management and legislative quality, driver capacity including the commercial competitive pressures are also key determining factors in safe performance.

Large and small firms operate in this complex environment with a mix of government, industry and community programs aimed at improving and maintaining safe heavy vehicle operations across the road network.

This symposium will present some key examples of these many factors and programs aiming to explain research and on road issues and results, successful practices, as well as legislative developments. There will be a primary focus on the how these affect the capacity of the driver particularly in managing fatigue.

Speakers:

Chair

- **Professor Ann Williamson - Overview**

Presenters

- **Mr Ben Maguire - ATA CEO - "The role of Industry accreditation programs"**
- **Dr Sarah Jones - TOLL Australia - "Recent research and developments in monitoring fatigue in large fleets"**
- **Transport Operator WA - "Transport Assurance" holding transport providers responsible for safety performance"**
- **Mr Sal Petrocitto - CEO Heavy Vehicle Regulator - "Developments in safe regulations"**
- **Mr Chris Adams - Chair, WA Heavy Vehicle Fatigue Reference Group - "Why should WA be any different?"**



2. Developments in **motorcyclist training, licensing and PPE research and implementation**: Presentations & jurisdictional discussion panel

DOUBLE SESSION

Organiser: **Associate Professor Teresa Senserrick**

Email: t.senserrick@unsw.edu.au



Background

With the increasing popularity of motorcycling in Australia, there is increasing demand for new and improved training and licensing systems for new riders, as well as skills reviews and extension of learning for continuing and returning riders. This presents considerable challenges in development and implementation, particularly given the wide range in rider demographics and characteristics, including varying levels of on-road and off-road riding experience. Developing a safe system to improve the standard and use of motorcyclist personal

protective equipment (PPE) is a concurrent challenge.

Purpose of Symposium

This symposium will showcase latest research and implementation developments in motorcyclist training, licensing and PPE in Australia. This includes development and implementation of Victoria's new three-stage Motorcyclist Graduated Licensing System (M-GLS), which particularly focused on including on-road coaching and assessment. Elements of this system have been adapted and introduced in Queensland and Tasmania. While these initiatives necessarily target novices, this symposium will also explore alternative education approaches for continuing and returning riders and current work to develop a star rating system for motorcyclist protective clothing.

Justification

Motorcyclists have a high vulnerability to crash injury and recent gains in reducing passenger vehicle casualties have not been achieved to the same degree for motorcyclists. Most existing training and licensing systems in Australia were developed to teach novices the basics of how to ride, whereas now there is increasing demand for these also to ensure safety throughout a rider's lifetime. Additionally, the protective performance of currently available motorcyclist clothing is variable and many garments are poorly designed for use in Australia's hot climates. To achieve a safe system for motorcyclists new approaches are needed, presenting both development and implementation challenges.

Format of Symposium

This symposium will include several presentations from researchers, government regulators, and industry training providers, followed by a discussion panel with representatives from jurisdiction road authorities from around the country.

Presentations

- **Victoria's New Motorcyclist Graduated Licensing System (M-GLS)** - *Rodney Blythe, VicRoads* - Rodney Blythe, Senior Project and Policer Officer at VicRoads, was the VicRoads representative overseeing the development and implementation of Victoria's M-GLS. He will present on the background, development and final requirements and restrictions of the M-GLS and discuss associated challenges from a state government perspective.
- **Development of Victoria's M-GLS Education, Training and Assessment Components** - *Teresa Senserrick PhD, The University of New South Wales* - A key change in Victoria's new M-GLS was the introduction of compulsory education, training and assessments at three time points, including a requirement to include on-road components. Teresa Senserrick, who led a large collaborative team to achieve this, will present the research and piloting conducted to develop the three key courses: Motorcycle Learner Assessment, Motorcycle Check Ride, Motorcycle Licence Assessment.
- **New Training and Licensing System Implementation Challenges and Opportunities for Rider Training Providers** - *Mr Max Thompson, Stay Upright Rider Training*: - Max Thompson, National Training & Development Manager at Stay Upright, has been involved in the development, implementation, rollout and subsequent reviews of Victoria's M-GLS. Further experience has been gained in its adaptation and rollout in Queensland. He will present on implementation challenges and opportunities from an industry perspective.
- **New Approaches to Rider Education for Continuing and Returning Riders** - *Graham Knight, The University of New South Wales* - Graham Knight, PhD Candidate, will present on new education approaches for continuing and returning riders based on his research, background and experience in education program design and implementation – both as Rider Training & Programs Coordinator (government and corporate) and as Riding Instructor and Instructor Trainer.
- **Effect of Time to Collision on Counter-Steering in an Emergency Scenario: a Motorcycle Riding Simulator Experiment** - *Giovanni Savino, Universita degli Studi di Firenze, Monash University* - This presentation will report on a motorcycle riding simulator experiment that explored 14 participants' counter-steering responses to an emergency scenario that was manipulated for time to collision (TTC). Slower responses were found at a 1 second TTC than 1.5 second TTC, suggesting the amount of training required might increase as the time available to respond decreases.
- **The Motorcycle Protective Clothing Assessment Program: A Star Rating System** - *Christopher Hurren PhD, Deakin University* - This presentation reports on research to develop an independent process for testing and publicising the protective and thermal management performance of motorcycle protective clothing to encourage usage and reduce injury rates. Protocols were based on existing standards to allow a smooth transition for industry to improve their products where necessary.
- **Jurisdiction Discussion Panel: Current and Future Directions for Motorcyclist Safety in Australia** - *Moderator: Teresa Senserrick PhD, The University of New South Wales* - Following the presentations, a panel of representatives from Australian state and territory government road authorities will discuss their perspectives on current and/or future motorcyclist safety initiatives, particularly in relation to education, training and PPE.

THIS SYMPOSIUM IS A DOUBLE SESSION

3. **Australia's collaborative journey to safer roads** by understanding road infrastructure related risk

Organiser: **Mr Simon Harrison**

Email: simon.j.harrison@tmr.qld.gov.au

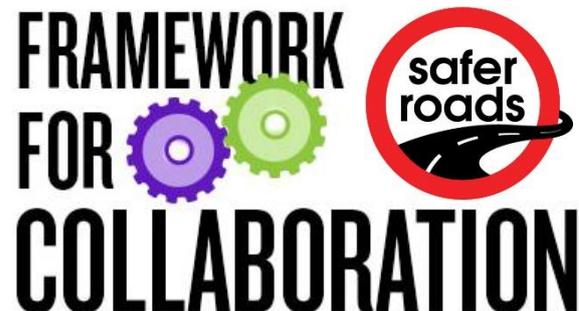


Background

iRAP, collaboratively over 10 years, has developed the model used by AusRAP to monitor and publish road infrastructure star ratings for Australia's road network, and develop Safer Road Investment Plans that optimize lives saved per dollar spent. The Australian National Risk Assessment Model, ANRAM, has been developed by Austroads, utilizing the iRAP and AusRAP protocols and existing crash history to create a tool that provides a risk rating for a road, a predicted crash reduction, and a program development function to test infrastructure solutions that reduce crash risk and crashes.

Purpose of Symposium

The purpose of this symposium is to present the collaborative approach and technical advances that have led to ANRAM through 4 x 15 minute presentations and a 30 minute panel discussion. The planned presentations aim to show the journey that has occurred, from the perspective of the various key stakeholders. The panel discussion will allow open discussion on the future use of ANRAM and way forward.



Justification

While iRAP, ANRAM and AusRAP research and development has been presented in the past, the symposium style of presentation will allow a more collaborative, and in-depth understanding of this work, with the panel discussions focusing on future opportunities to improve the way we use infrastructure risk data to manage crash risk.

Presenters, Title of Presentation & Brief Description

David Bobbermen, Austroads - *Austroads' research leadership and 10 year investment in safer roads engineering* - David, the Austroads Safety Program Manager, will present on:

- National Road Safety Strategy linkages
- Linking to Network Planning experience in Queensland
- Links to road Stereotype work may be relevant depending on progress

Rob McInerney, iRAP - *Contribution to iRAP global models and use around the world* - Rob, the iRAP CEO, will present on:

- Austroads research driving investment across 80+ countries

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- Global policy and implementation case studies
 - The ANRAM innovations and future potential

Craig Newland, AAA - *The journey to public acceptance of AusRAP risk* - Craig, the AAA Technical Director, will present on:

- Aims and objectives of AusRAP
- National and club-based promotion and use of AusRAP results
- Working with jurisdictional authorities to encourage the use of risk assessment and public messaging of Star Ratings

Simon Harrison, Department of Transport and Main Roads, Queensland - *Summary of ANRAM analysis and software integration* - Simon, Director (Safer Roads), will provide a technical presentation on the development of ANRAM, looking at:

- Summary of 100,000km+ of AusRAP ANRAM assessments
- Latest on ANRAM software integration
- Case studies on upgraded roads (e.g. Bruce Highway)

Panel Discussion

The panel discussion will comprise the following participants to field questions:

- **David Bobbermen**, Austroads
- **Rob McInerney**, iRAP
- **Craig Newland**, AAA
- **Simon Harrison**, Department of Transport and Main Roads
- **Rita Excell**, ARRB or **Chris Jurewicz**

4. Implementing roads for Safe Systems – An exploration of approaches used in Australia and New Zealand

Organiser: **Mr Rob McInerney FACRS**

Email: rob.mcinerney@irap.org

Background

Across Australia and New Zealand, road authorities and their government and industry partners are grappling with the application of Safe System thinking to the road network. Safe System starts with an ethical mandate, while road infrastructure safety improvements have historically been justified on economic grounds. Safe System demands a systematic and holistic approach to dealing with risks, while road agencies have typically applied improvements that address specific risks in specific locations.



Purpose of Symposium

This symposium seeks to bring together representatives of road authorities, transport and infrastructure departments, and the construction industry, to share experiences and test ideas in relation to the following:

- Identifying and prioritizing the implementation of infrastructure countermeasures to address safety risks
- The role of Safe System compliant infrastructure and 'interim' or 'cost-effective' treatments
- Issues with economic justification and funding
- The relationship between best practice recommendations, current guidelines and actual practice.

Justification

Jurisdictions across Australia and New Zealand are taking different approaches to the use of infrastructure to reduce road trauma. There is also considerable variation in approach used at the local government level. Safe System thinking and practice continues to brush up against established norms and available guidelines. The rationale of this symposium is to bring relevant parties together to discuss barriers and opportunities to work in a more collaborative and effective way in the future.

- **Rob McInerney, iRAP - Impact investing and iRAP** - The international Road Assessment Programme (iRAP) is a registered charity with the vision for a world free of high-risk roads. With RAP projects and programmes now active in over 80 countries worldwide, iRAP works closely with key development bank, political and technical leaders from each country to eliminate high-risk roads and save lives.
- **Colin Brodie, NZTA - The NZ Approach to Populating Road Safety Infrastructure Programmes** - The New Zealand Transport Agency has developed a strategic approach to identifying high-benefit opportunities that moves away from a focus on sites with High Collective Risk alone. This attempts to give a pragmatic approach that identifies the appropriate level of intervention, given practical, financial or public acceptance constraints.
- **Michael Nieuwesteeg, Transport Accident Commission - Victoria's Safe System Road Infrastructure Program and Towards Zero 2016-2020** - Victoria is investing over \$1 billion in road improvements over 2016-2020, most of which will follow Safe System principles. Conventional improvements are being progressively replaced by systematic treatments. TAC and VicRoads have partnered to create a Safe System Road Infrastructure team, which aims to deliver and promote Safe System infrastructure.
- **David Healy, Road Safety Consultant - Reflection and interactive discussion** - The symposium will include a panel discussion and ample opportunity for questions and views from the audience.

4. Australian naturalistic driving and cycling Symposium

DOUBLE SESSION

Organiser: **Professor Judith Charlton**

Email: Judith.Charlton@monash.edu



Background

Naturalistic Driving Studies (NDS) offer an innovative methodology that can provide answers to some intractable, high priority, road safety problems that cannot be solved using traditional methods. Using vehicle sensor and video technology, NDS opens new possibilities to explore how people drive/ride in normal and safety-critical situations, by analysing how they interact with their own vehicle, in-vehicle and portable technologies, passengers and other road users, and road infrastructure, in different

driving/riding environments.

Purpose of Symposium

This double-session Symposium encompasses driving and cycling themes and will showcase findings from four large-scale NDS projects: the *Australian Naturalistic Driving Study*, the *Safer Cycling and the Urban Road Environment* and two older driver projects: the *CEDAR STUDY which is an Older Drivers with Cataract Prospective Cohort Study* and the *Ozcanrive older driver cohort study*. Topics will include, analysis approaches, exposure and behaviour patterns of specific road user groups including speed, fatigue and distraction, and how specific road user characteristics relate to driving/riding behaviours.

Justification

Traditionally, road safety research effort has centred on analysis of crashes, road user self-report and simulation experiments. These sources however, are limited in the depth and accuracy of information they can provide about real-world road user behaviour. NDS overcomes these weaknesses and provides new insights into how drivers/riders manage the demands of driving in the real world, how they modify their behaviour to adapt to situations or conditions of increased crash.

PART A: NATURALISTIC DRIVING STUDIES

- **Presenter 1 Prof. Ann Williamson**, Transport and Road Safety Research Centre, University of New South Wales - Australian Naturalistic Driver Study (ANDS) of Distraction: Circumstances and Effects Driver distraction is suggested to be partly responsible for increases in road traffic crashes. Too little is known about frequency and under what conditions drivers become distracted and its effects. Results will describe look away periods and the context in which these occur and when they effect safety risk.
- **Presenter 2 Andry Rakotonirainy**, Centre for Accident Research and Road Safety-Queensland, Queensland University of Technology - Video processing based methods to automate data analysis of naturalistic driving - Analyzing and reconstructing driving context is crucial for understanding driver behaviour. Traditionally the analysis of video data from naturalistic studies has been undertaken manually and coding of events has been incredibly time intensive. This

presentation will describe preliminary findings on the use of video processing methods to analyse ANDS and drone data.

- **Presenter 3 A/Prof Jeremy Woolley, Centre for Automotive Safety Research, University of Adelaide** - Australian Naturalistic Driver Study (ANDS) Variations exhibited in travelling speeds during journeys -
- The travelling speed of vehicles is a key determinant of injury outcomes in the road network. While there is reasonable knowledge about speed distributions for vehicles passing specific points in the network, less is known about the speed distribution of individual vehicles over the duration of their journey. This paper will discuss speed observations over entire journeys from ANDS and the circumstances that exist when variations in speed occur.
- **Presenter 4 Prof Jude Charlton/Dr Sjaan Koppel, Monash University Accident Research Centre (MUARC)** - Driving into older age: Five-year driving patterns of older Australians in the Ozcandrive study. - Driving plays an important role in individual autonomy and safe mobility of older adults and is strongly associated with independence and social inclusion. This paper describes the five-year profile of driving exposure for drivers aged 75+ in the Ozcandrive cohort study and the role of driver characteristics.
- **Presenter 5 Seraina Agramunt/Prof Lynn Meuleners, C-MARC, Curtin University** - The Cataract Extraction and Driving Ability Research (CEDAR) Study - Cataract is a leading cause of visual impairment in Australia. As more older adults are driving, the number of people with cataract on the roads will increase. This paper will examine the changes before and after first eye cataract surgery on objective visual measures and driving outcomes including driving exposure, habits and patterns for eighty participants.

PANEL DISCUSSION

Part B: NATURALISTIC CYCLING STUDIES

- **Presenter 6 Prof. Narelle Haworth, Amy Schramm CARRS-Q** - Passing distance video analysis - Minimum passing distance rules for motor vehicles passing cyclists have been introduced in many parts of the world and in several local jurisdictions. Arguably the most important measure of the effectiveness of their implementation is the extent to which passing distances increase. Some studies have used ultrasonic sensors fitted to the researchers' bicycles to measure passing distances but our approach has been to use video recordings from cameras mounted to roadside poles. Video data provides a fuller record of the passing event, identifying the characteristics of the cyclist (gender, approximate age, type and conspicuity of clothing, helmet use, type of bicycle) and the vehicle (car, bus, truck etc.). This allows an analysis of the prevalence of these factors and their associations with passing distance. Some studies (including ours) have had limited success in automating the analysis of this video data. This presentation will describe our learnings from several studies and the relative benefits of different approaches to capturing passing distance data.
- **Presenter 7 A/Prof. Jennie Oxley, Brendan Lawrence MUARC** - You say one route, we observe four: Precise observation of cyclist route and infrastructure choices - This presentation will introduce *The Safer Cycling in the Urban Environment (SCUE) study: Observation of cyclist exposure to potential injury risk* - a naturalistic cycling study, instrumenting bicycles with forward and rearward cameras and GPS device. The study was designed to observe the on-road experiences of a sample of Melbourne cyclists and the findings related to cyclist exposure to injury risk in high-risk urban environments. This presentation will focus on an examination of the large variation in the route choices made by cyclists, and the use or avoidance of road

infrastructure. A discussion of the strengths of naturalistic observational data will be provided, with some case examples of frequent route choices.

- **Presenter 8 Brendan Lawrence, A/Prof. Jennie Oxley MUARC** - See no evil, report no evil: The benefit of rearward facing footage to identify risks to cyclists - A substantial proportion of cyclist injuries (with fatal and serious injury outcomes) occur as a result of side-swipes, rear-ending and left-turning vehicles). This presentation will focus on these key cyclist safety themes and examine rearward facing video footage (and paired with forward facing) to understand safety risks. A discussion of how this insight is not readily obtained through other study methods will be presented.

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Presenter 9 A/Prof. Jennie Oxley et al MUARC

- Practical techniques to understand the influence of bicycle lane characteristics on cyclist position - This research presents a method for measuring the width of bicycle lanes and the lateral position of cyclists within the lane through the use of a sports video camera mounted to the handlebar of the bicycle. Automated video analysis techniques using computer vision were utilised to perform the calculations. The findings suggest that the technique was highly accurate, however on average the software did underestimate the bicycle lane width and the cyclists lateral position within the lane.



- **Presenter 10 Michelle Fraser, Prof Lynn Meuleners et al C-MARC, Curtin University** - A naturalistic study of group riding in Perth, WA - This study has collected over 200 hours of video footage and GPS data of group riding in Perth, WA. Individual cyclists attached cameras to the front and rear of their bikes and recorded up to 6 hours of footage of their usual group riding. Each cyclist also provided detailed information about the characteristics of their cycling group/s through an interview. The study aims to analyse unsafe events and behaviours observed in the group riding footage and determine risk factors for these. This presentation will outline the methodology of the study and provide some initial observations of the footage.

PANEL DISCUSSION

THIS SYMPOSIUM IS A DOUBLE SESSION

6. Gruen Transfer: The Road Safety Pitch – Safe Together

Organisers: **Dr Marilyn Johnson**

Email: marilyn.johnson@monash.edu; safetogethercompetition@amygillett.org.au

Background

The AGF Safe Together competition symposium will present the finalist pitches of road safety communication video clips. Based on the ABC television program, *Gruen Transfer* segment 'The Pitch', the symposium will also include facilitated discussion with an expert panel.

This is the second year for the competition and, building on the success of last year, the competition has been expanded. In addition to the university student teams, there is a new category open to the public. The competition will also be open nationally, including entrants from regional and remote areas, who will join the conference live via video/telephone link.

Purpose of Symposium

The purpose of the symposium is to target a specific road safety issue and create a space for new, creative responses. It provides an opportunity to broaden the discussion of road safety to include community and non-expert perspectives, and fits well with this year's theme, 'Expanding our Horizons'. The competition produces high-quality content that can be distributed via online media. Further, the symposium generates a sophisticated and accessible conversation about road safety messaging.

CAR DOORING VIDEO COMPETITION



Justification

This year's competition topic focuses on cyclist crashes involving unexpectedly opened vehicle doors, often referred to as dooring, which can lead to serious, and sometimes fatal, outcomes. While cycling infrastructure continues to be implemented nationally, often the bike lane is positioned alongside parallel parked cars, increasing the risk of cyclist-door collisions.

Before the conference, finalist entries in both categories will be open to a People's Choice public vote. This increases the viewers of the content and extends the message about road safety. There is also online and mainstream media interest in this year's competition that includes feature content centred on the public vote. The public vote will continue live into the symposium with the winner announced at the end of the session.

Presenters

Presenter 1: Host (Marilyn Johnson)

The host is yet to be confirmed. The host will facilitate the event, direct finalists to introduce their videos and facilitate the discussion and feedback from the judges. The host will also prompt the audience to vote for the People's Choice award.

Presenter 2: The Judging Panel

The Judging panel is yet to be confirmed. Ideally it will include:

- A representative from the Amy Gillett Foundation
- An industry competition sponsor
- An advertising/communications expert
- A representative from the Australasian College of Road Safety

Presenter 3: Finalists

Six finalists will be invited to join the symposium to present and discuss their videos. Local finalists will present in person, all non-local finalists will be involved via video/telephone link. Finalists will be confirmed by mid-August 2017.

Additional note re content: Although entrants have creative license in creating their video clip (e.g. can be emotive, humorous etc), all clips must adhere to the Commercial Television Code of Practice. All submissions will be viewed by the judging panel prior and only shortlisted finalists will be made publicly available. All clips will contain the ARSC2017 logo.

Up for it? Email the organisers for more details: safetogethercompetition@amygillett.org.au

Have a look at the [Competition Website](#) here.

New closing date for entries - 1 September 2017

7. **Motorcycle safety research in low and middle-income countries: Different approaches to generate an evidence base**

Organisers: **Dr Felix Wilhelm Siebert (Leuphana University Lueneburg, Germany) & Dr Paolo Perego (Università Cattolica del Sacro Cuore di Milano, Italy)**

Email: felix.siebert@uni.leuphana.de

Background

The goal of the Decade of Action for Road Safety is to lower the number of fatal traffic accidents in the world. Since globally there are numerous causes for traffic accidents, there is no universal traffic safety program that can be applied to decrease accident numbers. Therefore, an evidence base is necessary to identify country and culture specific safety problems. This task falls to individual traffic safety researchers around the world.

Purpose

The purpose of this symposium is to connect researchers, with different approaches for studying road safety challenges in low-and middle-income countries. The different approaches arise not only from the different backgrounds of the researchers, but also from the different cultures they work in. Discussing their experience in working with different methods in diverse cultures can lead to new ideas and new approaches to lower accident numbers.



Justification

Therefore, a constructive and recurrent exchange and discussion of knowledge is necessary to further the cause of traffic safety. Although the Decade of Action for Road Safety is a global initiative, few researchers are active in more than one country. Hence, the ARSC is a great opportunity to transfer experiences and methodological knowledge across country borders. Each researcher will present their topic for 12 minutes followed by 5 minutes of discussion. This will leave 5 minutes for changing speakers.

Assi, Guneet – Road Safety Specialist, World Bank-aided RRSMP (Rajasthan Road Safety Modernisation Project) - The Invincibles: Attitude of Indian motorcycle riders towards helmets - Helmets continue to be a safety gear that is willfully avoided by two-wheeler drivers for diverse, and strangely, frivolous reasons. I would like to share these perceptions from the Indian context based on my findings during various short surveys.

Perego, Paolo - Università Cattolica del Sacro Cuore di Milano, Italy - Developing a questionnaire to understand the behavior of Tanzanian motorcycle riders - The Bodaboda Questionnaire (BbQ) was developed to gather information about Tanzanian motorcycle drivers. After a first version of the BbQ, a review and a focus group, the final version was distributed by 14 trained interviewers to 513 Bodaboda drivers of Arusha City in Tanzania in November 2016.

Aye Moe Moe Lwin – University of Public Health, Yangon, Myanmar - Hospital based injury surveillance – a study on the severity of motorcycle crashes in Myanmar - In a collaborative effort by the WHO and the Ministry of Health, a hospital surveillance system was implemented throughout Myanmar. Data on injury

causes and the severity of injuries is stored digitally, with a focus on data collection of road traffic crashes. Data on motorcycle crash severity and helmet use will be presented.

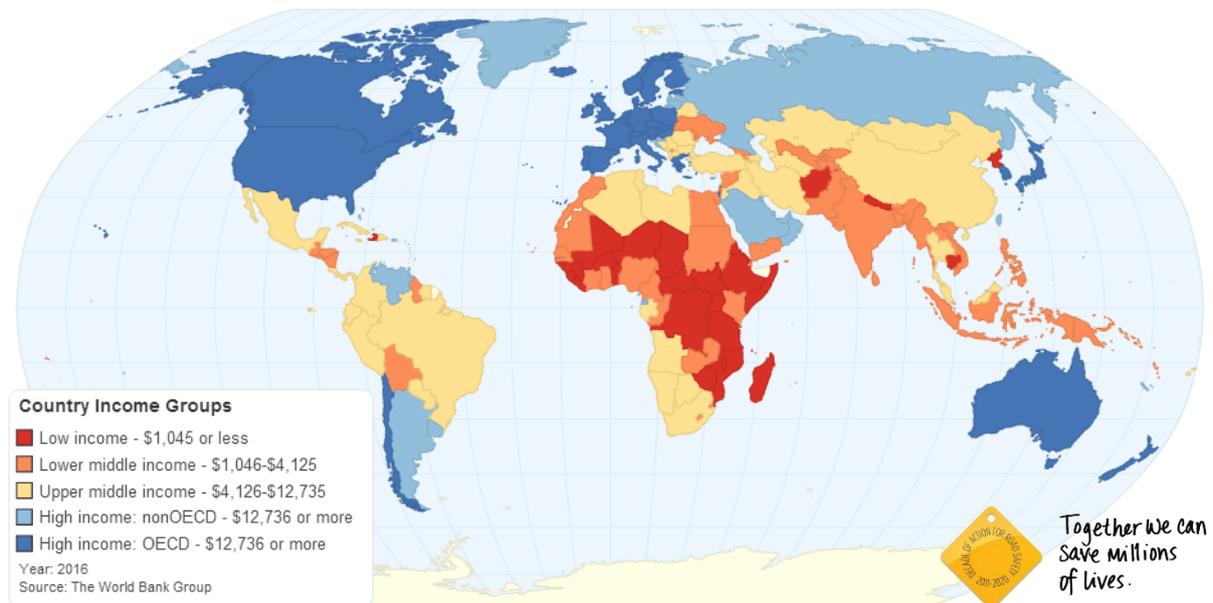
Siebert, Felix Wilhelm – *Leuphana University Lueneburg, Germany* - Using video cameras to assess the helmet use rate of Myanmar motorcycle riders - Low cost video cameras were used to film traffic at eight observation sites in Myanmar to update data on motorcycle helmet use throughout the country. Helmet use varied depending on the observation site, time of day, position on the motorcycle, and between urban and rural sites.

King, Mark – *CARRS-Q, Queensland University of Technology, Australia* - Dealing with diversity: Addressing the challenges of motorcycle safety research in widely differing contexts - Motorcycling in low and middle income countries is marked by diversity: differences include the proportion of the vehicle fleet comprised of motorcycles, the range of motorcycle/derivative types and uses, road infrastructure and quality, policy and legislation, enforcement practices, and typical behaviours. The other papers in this session form a useful introduction to a broader discussion on how motorcycle safety research can contribute to an evidence base that recognises the influence of country/culture-specific factors, while giving insights into more generalizable approaches to motorcycle safety.

8. Road Safety Challenges in Low and Middle-Income Countries

Organiser: **Dr Lori Mooren FACRS**

Email: lori.mooren@unsw.edu.au



Background

ARSC 2016 featured a scholarship initiative that provided financial support to enable 9 delegates from low- and middle-income countries (LMIC) to participate in the Conference. These delegates recommended for future, prior contact with all scholarship awardees to identify any specific expertise, network, or support that they would like to gain during the conference.

Purpose of Symposium

The purpose of this symposium is to:

1. identify the major capacity building needs in the Asia Pacific Region and beyond; and
2. enable international delegates, especially LMIC scholarship awardees, to learn about road safety research and practice of most relevance to their work.

Brief (5-minute) presentations on case studies in LMICs will be used to trigger open discussions on challenges in implementing road safety in this context. These are:

1. Ms Mirjam Sidik, Asia Injury Prevention Foundation, will speak on the challenges of implementing and sustaining helmet use in Viet Nam;
2. Prof Raphael Grzebieta, TARS, UNSW, will speak on the challenges of implementing a road safety audit program in Romania;
3. Dr Socheata Sann, CARRS-Q, QUT, will speak on the challenges of implementing a road injury data collection system in Cambodia; and
4. Dr Guneet Singh Assi, PWD, Rajasthan Consulting Engineers Group Ltd will speak on the challenges of improving behaviour of young drivers in India.

Justification

For international delegates, the Conference may be more beneficial if a session was designed to address their particular interests, learning needs and network building. The delegates who are awarded scholarship funding to attend the Conference should be provided with optimal opportunities to gain new

knowledge and road safety network support. In addition, ARSC2017 is being successfully promoted as an international conference. With many international delegates registering it is important to reflect this in the Conference program. This Symposium aims to specifically attract delegates who based in countries other than Australia and New Zealand.

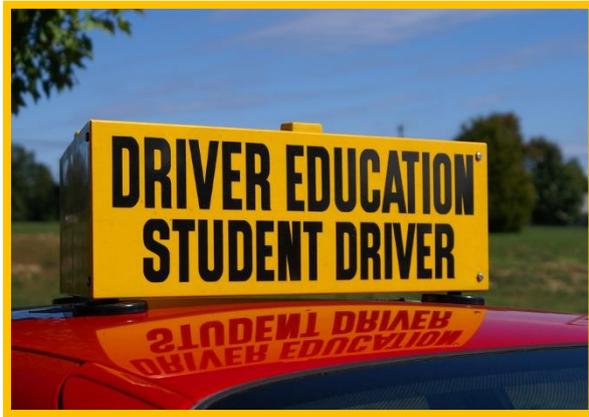
Presenters, Title of Presentation & Brief Description

- **Dr Lori Mooren**, *Transport and Road Safety Research (TARS), University of New South Wales (Chair of the Symposium)* - Introduction and facilitation of “exchange of good practice and research”
- **Dr Alina Burlacu**, *World Bank, East Asia Pacific Region* - Road safety issues, challenges and opportunities to build capacity
- **Dr Mark King**, *Centre for Accident Research and Road Safety – Queensland (CARRS-Q), Queensland University of Technology* - Case study discussion - four case studies will be presented to trigger discussions on the challenges of implementing and sustaining effective road safety actions.

9. Driver education and training: An interactive workshop for safer drivers

Organiser: **Dr Marilyn Johnson**

Email: Marilyn.johnson@monash.edu



Background

The probationary licence years are a dangerous time for drivers. Of the drivers killed on Australian roads in 2015, 1 in 5 (20.5%) were aged between 17-25 years (BITRE, 2016). How we teach people to drive for the safety of people inside and outside of the vehicle varies between states and territories and between Australia and New Zealand. This mixed approach includes formal government requirements, competency in skills and knowledge, minimum hours of supervised driving, most with parents or peers, some with professional driving instructors.

Purpose of Symposium

The purpose of this symposium is to create space in the conference to bring together practitioners, researchers, government agencies and people with an interest in driver education and training to explore two key questions:

- How can we improve the way we teach people to drive?
- What can we learn from each other?

This symposium is part presentation and part interactive workshop. The presentations will be given speed dating style to provide an overview of industry practices and recent research. Followed by a facilitated, interactive workshop where the participants will consider the key questions from a range of perspectives.

Justification

The Australasian Road Safety Conference brings together leading experts in driver education and training. This symposium will provide an opportunity to share knowledge and experiences, build new networks, strengthen existing relationships and contribute to the conversation about creating safer drivers in Australia and New Zealand.

Presenters, Title of Presentation & Brief Description

Chair/facilitator: Dr Marilyn Johnson

Speed dating presentations (5 minutes per presenter)

- ***Terry Birss, Road Safety Education Limited*** - Road Safety Education provides driver education programs to over 50,000 senior high school students every year from more than 650 schools in Australia and New Zealand. With a focus on the safety of the driver and the role of passengers.
- ***Associate Professor Teresa Senserrick, University of New South Wales*** - A/Prof Senserrick has over 20 years experience in health and safety research and is an international leader in young and novice driver training. She will provide an update of global trends in driver training research and practice and implications for Australasia.

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- **Kathryn Collier, METEC Driver Training** - METEC Driver Training has provided learner and advanced driver training courses in Melbourne for over 40 years. The facility includes 10 hectares of land with 5km of private closed roads that provides a safe space for pre-learner and learner drivers. Ms Collier will provide an overview of the facility and the program delivered to over 5,000 Melbourne pre-learners.
 - **Dr Jennifer Bonham, The University of Adelaide** - Dr Bonham is the lead researcher on Cycle Aware, a current Australian Research Council study that is investigating how drivers are taught to share the road with Vulnerable Road Users in general and cyclists in particular. Her update will provide an overview of the national approach and how driver training can improve safety for cyclists.
 - **Rebekah Smith and Peter Phillips, RACV** - RACV provides school road safety education, conducts research in the young driver area as well as operating the largest drive school in Australia. Their update will provide an overview of learner driver research working together with driver training practice.
 - **Eve Mitsopolous-Rubens, VicRoads** - VicRoads has recently completed a review of the Graduated Licensing System in Victoria and the state government has plans to develop a driver training centre for pre-learner and learner drivers. Their update will provide an overview of the review findings and the next steps planned for driver training.
 - **Kerrie Tregenza, Transport Main Roads** - In 2015, Transport Main Roads held their first Co-Lab Youth Road Safety Challenge. The online campaign aims to engage young people in key road safety issues with the winning idea stigmatising speed aimed at young men. The presentation will share insights from this challenge and details of Co-Lab 2 which will focus on mobile phones.

Interactive workshop

The second part of the symposium will be an interactive workshop where participants will be grouped to consider the two key questions from a range of perspectives including:

- Driver training practice: best practice, worst practice, actual ('real-world') practice
- Different perspectives: student, professional instructor, parent/peer
- Industry standards
- Role of government and education

Outputs from the interactive workshop will be collated and prepared as a manuscript which will be submitted for consideration to the Journal of the Australasian College of Road Safety to share the insights from the forum. Manuscript preparation will be co-ordinated by Marilyn Johnson in collaboration with the symposium presenters and interested participants.

10. Community-based road safety programs in low and middle-income countries: Success and sustainability

Organiser: **Dr Mark King**

Email: mark.king@qut.edu.au

Background

Road crashes and injuries are a growing issue in low and middle income countries (LMICs). Best practice approaches from high income countries tend to be centrally managed and require levels of funding and capacity that may be inaccessible to LMICs. There may also be greater local variation in motorization, infrastructure, knowledge and behaviours. There has been growing interest in community road safety programs as an alternative, however there are questions about their success and sustainability.

Purpose of Symposium

This symposium aims to foster an exchange of experiences about successes and lessons learned regarding community based road safety programs in LMICs. It will explore how success is defined, measured and evaluated, and the factors that appear to contribute to sustainability using local resources and community capacity. The generalizability of these experiences across LMICs will also be discussed.

Justification

About 90% of road traffic fatalities occur in LMICs, where the capability of government to address road safety is limited. Community road safety programs have become a popular alternative, but there is little information sharing. The conference is an important platform attended by many researchers and practitioners from (or working in) LMICs. The symposium will encourage participants to exchange their experiences, gain alternative perspectives on the challenges presented in LMICs, and have opportunities for networking.

- **Shihiru Date**, *Asian Development Bank* - Community Based Rural Road Safety - A Case of Cambodia - The presentation focuses on changing road user behaviour through a three stream approach: data collection and analyses, safe school zone implementation, and community enforcement, for sustainable community based road safety.
- **Mark King**, *Centre for Accident Research and Road Safety – Queensland* - What are “success” and “sustainability” for community based road safety programs in LMICs? - Drawing on examples from LMICs and high income countries, describes and reflects on the way that success is defined and measured, and how programs are sustained.
- **Socheata Sann**, *Centre for Accident Research and Road Safety – Queensland* - Community perceptions and beliefs about road safety and their implications - Culture/religion-based perceptions and beliefs about road safety among persons with disability (as a result of a road crash) in Cambodia and their implications for community based road safety programs.
- **Witaya Chadbunchachai**, *Thai Health Promotion Foundation* - Community’s role in road traffic injuries, case study for nationwide community program in Thailand - Thai Health Promotion Foundation applies WHO safe community principles to establish sustainable programs. Focal persons work actively promoting road safety in all provinces; many good practice models are in operation.

11. Is there space for **Safe System within the Movement and Place philosophy?**

Organiser: **Mr Chris Jurewicz**

Email: chris.jurewicz@arrb.com.au



Background

Road agencies and transport professionals are constantly challenged to make complex planning decisions, which often require balancing of conflicting priorities. These challenges have been amplified through integration of competing demands of private, commercial, active and public transport, with land use and amenity. Over the last decade, Movement and Place philosophy emerged to guide holistic consideration of these competing demands through people-based approach to transport planning.

Purpose of Symposium

The purpose of the Symposium is to ask the question if there is space for inclusion of Safe System objectives within the quickly maturing Movement and Place approach. The panel of experts will showcase emerging guidance for Movement and Place application, and discuss with the participants how Safe System principles are being (or could be) included within these to minimize death and serious injury on our roads.

Justification

A number of recent applications of Movement and Place have relied on conventional appraisals of road safety, e.g. via crash history, or opinion-based statements. There is a need to embed recent Safe System implementation learnings about road infrastructure, speed management, human factors, and fleet management, in Movement and Place guidance and tools. This Symposium will assist road agencies and consultants in refinement of their practice, and in creating an increasingly Safe System aligned road network.

The seminar will consist of short presentations by the transport agency thought leaders in the field of Movement and Place. This will be followed by a panel discussion with participants to explore what the successes to date and future opportunities.

- **Chris Jurewicz**, *Principal Research Engineer, Australian Road Research Board, Melbourne* - Introduction to Movement Place and Safe System concepts (10 min) - Chris will MC the event, welcome the participants, and provide a brief introduction into the two visions. He will outline the main benefits of interlacing the two for all road transport users. Chris leads and conducts research in development and implementation of Safe System vision for road safety. He provides advice to Australian, New Zealand and international transport agencies. His current areas of

activity include Safe System road design and implementation, speed management, engineering guidance development, innovation management and Big Data.

- **Bryan Willey**, *Transport Planning and Infrastructure Director, Transport for New South Wales* - The application of Movement and Place in NSW - making safer and better road environments and public places (10-12 min). Bryan will discuss development of the Movement and Place guidance in NSW and how they include Safe System infrastructure decisions. Bryan is leading the NSW Movement and Place initiative and development of practitioner guidance through the NSW Road Planning Framework. The Framework sets out strategic performance outcomes. Bryan also led the review of road network congestion and reliability in Australia and New Zealand on behalf of Austroads. He is currently leading the strategy and planning for an integrated land use and transport vision for Sydney and NSW for the next 40 years through 'Future Transport'.
- **Andrew Wall**, *Director Transport Integration Services, VicRoads, Victoria* - Victorian experience with embedding safety in Movement and Place (10-12 min) - Andrew will outline briefly the recent actions seeking to ensure that Safe System solutions can be considered in the road transport at planning and project levels. Andrew heads a multidisciplinary state road agency department tasked with transforming its practices towards full integration with all modes of transport. He championed Movement and Place approach in VicRoads (referred to as Movement and Place in Victoria) collating leading expert inputs and best practice into development of a suite of practitioner tools.