Preventing injuries, Saving lives, Building futures
The Monash Injury Research Institute is one of the world’s most comprehensive injury prevention research centres. It is unique in being grounded in scientific and academic excellence, while producing research which has real-life implications which are often translated into policy – whether it’s dealing with falls among older people or studying the use of assisted braking systems on motorcycles.

MIRI incorporates the highly respected Monash University Accident Research Centre (MUARC) and other key Monash researchers and groups. Because of the breadth of our research, MIRI has a strong national profile and an increasingly prominent international one. The Institute identifies emerging injury problems, monitors progress, determines and evaluates solutions and advises on safety strategies. MIRI is specifically designed to encourage our experts to actively collaborate in solving pressing, practical problems – a collaboration that allows our external partners access to expertise across their field of interest.

Our main research focus covers:
- Transport safety
- Home, sport and leisure safety
- Workplace safety
- Patient safety
- Violence and suicide prevention
- Acute care
- Injury outcomes
- Disaster resilience

These research areas are specifically designed to meet the range of challenges that comprise injury prevention and treatment, targeting the causes of both intentional injury (violence and suicide prevention) and unintentional injury (transport safety, home, sport and leisure safety, workplace safety and transport safety).

At MIRI, we focus on both the prevention of injury as well as the treatment and recovery from injury (injury outcomes, acute care). Our record in translating public health research into real world outcomes that benefit all Australians is one of which we are very proud. This Annual Report shows what we achieved in 2013 and gives some hints of even greater results to come in the following years.

Did you know?
Injury is the fourth most common cause of death of Australians after heart disease, cancer and lung disease.
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Chair’s foreword

The work of the Monash Injury Research Institute (MIRI) exemplifies one of the University’s principal goals: to achieve impact through excellence. In fostering strong and collaborative relationships with governments, industry and the general public, MIRI has a proud history of producing significant benefits for the Australian, and international, community, both by preventing injuries from happening or reducing their impact when they do occur.

MIRI maintained its growth in 2013. Journal publications increased from 82 in 2012 to 87 this year, while the number of book chapters published by MIRI staff went from two to ten. The Institute continues to attract students with an increase of 50% in postgraduate enrolment numbers.

MIRI has a national and international reputation for working with stakeholders in addressing real world injury and safety problems. Major new state and national projects funded this year include a major ARC Linkage grant, over three years, to study safe cycling on urban roads and a $7.6 million grant, also over three years, from the Victorian Traffic Accident Commission (TAC) allowing researchers to examine in detail hundreds of serious injury crashes to determine causes and develop preventative measures.

Internationally, MIRI has developed strong links with governments and academic institutions eager to gain from the Institute’s expertise at addressing problems and developing answers that save lives. In 2013, MIRI formed collaborative relationships with universities globally including the University of Dammam in the Kingdom of Saudi Arabia, a country that has one of the world’s highest road tolls.

I want to congratulate the academic and professional staff at MIRI for what has been a year marked by significant accomplishments. I look forward to what will be an exciting year in 2014.

Professor Pauline Nestor
Chair, MIRI Board
Pro Vice-Chancellor (Research)
Monash University

www.monash.edu/miri
Our Board

The MIRI Board is committed to ensuring the institute stays focused on addressing the prevention of injury in all settings.

Professor Bryan Horrigan
is Dean of the Faculty of Law at Monash University. He holds a doctorate in law from Oxford University as a Rhodes Scholar and has both academic and professional experience in public and corporate law and governance from Australian, transnational, and cross-disciplinary perspectives.

Professor John Thwaites
is a Monash Professorial Fellow and Chair of both ClimateWorks Australia and the Monash Sustainability Institute. He is a consultant at Maddocks Solicitors and he chairs the Australian Building Codes Board.

Professor Gary Magee
is Professor of Economics and Deputy Dean (Research) in the Faculty of Business and Economics. He is a former Director of the Asian Economics Centre at the University of Melbourne, Head of the School of Economics and Finance at La Trobe University, and Associate Dean (Graduate) in the Faculty of Business and Economics at Monash.

Professor Scott O’Neill
is a world-leading medical entomologist who held research positions in the United States from 1991 to 2001, mainly at Yale University. In 2001, he returned to Australia as Professor and Head of the School of Biological Sciences at The University of Queensland. In June 2011, Scott took up his position as Dean of Faculty of Science at Monash University.

Professor Maria Garcia De La Banda
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Professor Rod McClure
has medical qualifications, extensive clinical experience in emergency medicine, a PhD in injury epidemiology and specialist training in public health medicine. He has a 20-year history in injury prevention research and in 2013 was the Director of the Injury Research Institute, Monash University.

Professor Pauline Nestor
is the Senior Vice-Provost and Vice-Provost (Research) of Monash University. She attended Oxford University as a Rhodes Scholar and completed her Masters and Doctorate degrees in nineteenth-century English literature and culture. She was a foundation board member of the Victorian Registration and Qualification Authority and a member of the Victorian Higher Education Accreditation Committee, and has been a member of the ARC College of Experts.

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Director’s message

Professor Rod McClure

INJURY is the leading cause of death among young Australians and the fourth leading cause of death for all age groups combined. What we urgently need is a national commitment to addressing the problem of all-cause injury - for those 9,000 Australians each year who do not need to die, and many times more who do not need to live the rest of their life with disability, because of injury.

Monash University has the most comprehensive body of academics and researchers in the Australian injury field, and is comparable with any on the international stage. MIRI is well placed to provide research support for a whole of community approach to solving this problem of major public health importance.

The goal of the Injury Research Institute is clear: to improve the human condition by advancing knowledge and fostering creativity in the field of injury research.

As is MIRI’s mission: Through high-standard research and independent recommendations, to challenge and support citizens, governments, industries and other organisations in eliminating serious health losses due to injury from all causes.

What is also clear is MIRI’s roadmap for pursuing its mission and achieving its goals. Our tried and true approach has been demonstrating success for 26 years. It is a success which is compounding year on year. In 2013 MIRI achieved a critical mass, an expertise of international standard across the range of injury settings, ensuring our ongoing existence as an institute of international standing is secure. The fact that 2014 is projected to be our most successful year to date, in terms of financial income, research outputs, and community engagement, is indicative of the extent and quality of the work we are undertaking – and the results we are achieving.

We at MIRI believe in what we do. Our commitment to our goal is the reason for our success. As Director of MIRI, first and foremost, I thank the staff of MIRI for their unrelenting contribution to the cause. I also thank our university colleagues, and our government agency and industry partners, for being part of our journey towards a common goal.

I invite all readers of this report to review this record of MIRI’s work for year, and join our effort to address the problem of injury with the passion these pages display.

www.monash.edu/miri
This year has been another highly productive year for MIRI with a major funding announcement with the TAC; the hosting of a two week-long leadership program for senior road safety managers including ten senior executives from the World Bank; and a major increase in the number of papers published and papers presented at international conferences.

MIRI’s focus continues to be on strengthening its relationship with government and industry across all areas of injury prevention. This means that our research remains relevant to the community with our goal being simple: to reduce the numbers of people who die or are injured every day in Australia and overseas.

MIRI achieved some major goals this year in both the research area and in strengthened relationships with stakeholders. This represents increasing recognition – both here and overseas – that MIRI and the Monash University Accident Research Centre (MUARC) excels both in academic research and translational research that can be implemented into real life actions.

A number of MIRI staff achieved promotions in 2013. As of 1st January, 2014, A/Professor Lesley Day and A/Professor Michael Lenne were both promoted to full professors, Dr Michael Fitzharris was promoted to Associate Professor and Dr Sharon Newnam to Senior Research Fellow. The appointments recognise both the staff members’ expertise and commitment to their research as well as being a boost for what is still the relatively young field of injury prevention and road safety.

Funding
MUARC achieved some major funding milestones in 2013 with the awarding of an ARC Linkage grant of $1.4 million (three years), led by Professor Mark Stevenson and Dr Jennie Oxley, for the study of safer cycling in the urban road environment and an NH&MRC grant of $492,000 over three years which will look at work-related

In 2013 MIRI
• Had 10 book chapters, 87 journal articles and 25 peer reviewed conference papers published contributing to a further increase in our publication rate
• Supervised 34 PhD students and 5 MPhil students in the MIRI graduate studies program
• Formed a new collaborative relationship with the University of Dammam in the Kingdom of Saudi Arabia
• Strengthened our relationship with Australia’s Defence Science and Technology Organisation (DSTO) with the development of a laboratory that includes a simulator of a class of defence land vehicle used extensively in the army
• Produced two issues of Hazard, the publication of the Victorian Injury Surveillance Unit, providing data on trends in injuries involving the home, trampolines, bunk beds and button batteries, all receiving significant media and community attention
• Dr Eva Alisic was one of only 40 to be awarded a Young Scientists Award at the World Economic Forum in China.
• Dr Michael Fitzharris co-authored a major report that was key to the United Nations European Economic Commission adopting new regulations improving the safety of motor vehicle occupants in the event of side impact crashes.
road traffic injury, led by Professor Mark Stevenson, Dr Sharon Newnam and Professor Rod McClure.

A/Professor Jude Charlton, A/Professor Michael Lenné and Dr Kristie Young are co-investigators on a new ARC Linkage grant ($750,000) to undertake the Australian Naturalistic Driving Study (2014-2016). The grant was awarded to University of NSW, in partnership with Monash University, the University of Adelaide, Queensland University of Technology and road safety agencies (Transport NSW, NRMA, TAC, VicRoads). Together with an ARC LIEF grant ($570,000) funding technical equipment and facilities, this project will examine real-world driver and road user behaviours, under normal and safety critical situations.

Dr Michael Fitzharris successfully secured substantial funding for the research program entitled the Enhanced Crash Investigation System (ECIS). The program is funded to $7.6 million over three-years by the Transport Accident Commission and involves A/Professor Michael Lenné, Professor Mark Stevenson and Professor Russell Grueen, from the Alfred Hospital and the National Trauma Research Institute, as well as a number of international scholars.

Publications and Presentations
Professor Rod McClure, Professor Mark Stevenson, Mr Jason Thompson, Ms Christine Mulvihill, Dr Michael Fitzharris and Ms Sara Liu were all involved in a series of papers for The Lancet modeling land use, transport and population health, expected to be published in 2014. The papers highlight the critical role of land use in determining transport model choices and ultimately on the health of the population. Many of the papers have modelled large cities such as New York, London, Delhi, Beijing and Melbourne and, therefore, will be of considerable interest to planners, transport management agencies, health departments and governments globally.

Professor Mark Stevenson published a study in the American Journal of Epidemiology that investigated the causes of truck accidents between 2008 and 2011 in New South Wales and Western Australia – looking at issues ranging from driver sleepiness, payment of rates, use of stimulants, health of driver etc as contributors to the risk of accidents.

The Ozroadrve study is in its penultimate year and the international collaboration is starting to attract attention as an increasing number of journal articles are published. Dr Sjaanie Koppel was awarded an Advancing Women’s Research Success grant which supported her travel to McMaster University in Canada to further develop collaborations with colleagues in the Ozroadrve study.

A/Professor Michael Lenné achieved a major milestone as guest editor of a special issue of the prestigious Accident Analysis and Prevention journal. Devoted to developments in the use of on-road methods to better understand road safety crash risks and risk factors, the journal issue specifically looked at the use of vehicle instrumentation, through on-road and naturalistic studies, and the value of the “wealth of data about road user...
behaviour in real traffic”.

Professor Rod McClure joined the editorial board and was appointed Senior Editor for the Australian and New Zealand Journal of Public Health, and has been appointed to the editorial board of Accident Analysis and Prevention. Professor Mark Stevenson was appointed to the editorial board of the International Journal of Traffic and Transportation Safety.

Dr Michael Fitzharris also contributed to the World Health Organization International Spinal Cord Society report, which highlighted the global burden of spinal cord injury as well as the impact on everyday life. The report is an important step in the improved treatment of people living with SCI particularly in developing countries.

MIRI staff members continued to have a very strong presence at national and international conferences. A/Professor Michael Lenné spoke at the International Rail Safety Conference in the United Kingdom (UK), the Road Safety and Simulation International Conference in Rome and the 7th International Driving Symposium on Human Factors in Driver Assessment, Training and Vehicle Design in the US; Dr Eva Alisic spoke at the ESTSS Young Minds Conference in Italy; Dr Jennie Oxley presented at the Road Safety on Four Continents Conference in China and Dr Sjaan Koppel and Ms Suzanne Cross represented MIRI at the Children in Cars Conference in Germany and Professor Mark Stevenson was a keynote speaker at the Society of Automotive Engineering World Congress in Brazil and at the International Road Safety Conference in Sydney. He was also the Chair of the Transport Infrastructure Summit in Melbourne and spoke at the Traffic Safety Forum in Saudi Arabia.

A/Professor Judith Charlton was a visiting scholar at the University Suor Orsola Benincasa in Naples where she gave postgraduate lectures and participated in the strategic development of a new behavioural science research laboratory.

MIRI hosted two senior scientists from China for a two month education program. Mr Wenhui Zhou, from the Road Traffic Safety Research Centre of the Public Security Ministry in Beijing and Ms Yu Chang, from the Traffic Management Research Institute of the Public Security Ministry in Wuxi, were involved in programs as diverse as enforcement based research, crash scene inspection and managing challenges in motorcycle safety amongst many other sessions with MIRI researchers.

In early 2013 the University of Dammam in the Kingdom of Saudi Arabia announced the creation of the Saudi Aramco Chair for Traffic Safety. MIRI signed an agreement which will see staff collaborating in a number of research projects as well as the facilitation of seminars aimed at reducing Saudi Arabia’s significant road toll.

The MUARC Human Factors team, led by A/Professor Michael Lenné, collaborated with the Swedish Transport Administration and the Swedish National Road and Transport Research Institute (VTI) to test traffic safety and traffic management issues related to ramps exiting and entering the Stockholm bypass tunnel. Using the MUARC driving simulator, the effect on driver behaviour of restricted sightlines at on ramps in tunnel and freeway environments was examined with the resulting design concepts now being incorporated in the final design specifications for the Stockholm tunnel.

### International Outreach

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### Forming Stronger Relationships with Stakeholder

The Human Factors team also continued its on-going partnership with the Defence Science and Technology Organisation (DSTO). The newly developed laboratory simulates a class of defence land vehicle that can simulate a range of motion provided by military vehicles in sealed and unsealed roads.

The Trauma Lab, led by Dr Eva Alisic is currently working on two large projects, with the Royal Children’s Hospital and the Murdoch Children’s Research Institute, looking at how to help children recover from traumatic events.

Researchers from MUARC are working with the Amy Gillett Foundation as well as the West Australian and Victorian Governments in a world-first study looking at how the urban road environment can be

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enhanced to reduce injuries to cyclists.

In 2013, MIRI hosted a week-long intensive Road Safety Management Leadership Program led by the former Lead Road Safety Specialist at the World Bank, Mr Tony Bliss. Participants included the World Bank, National Transport Commission, Victoria Police, Department of Planning, Transport and Infrastructure (SA), New Zealand Transport Agency, VicRoads and the NSW Centre for Road Safety. Dr Maria Seguí-Gomez from the Universidad de Navarra, Pamplona in Spain gave the 2013 MUARC Annual Lecture.

Students Education and Training Programs: PhD, MPhil and Summer Vacation Students

MIRI is committed to research training for the development of new leaders in the field of injury prevention. Graduate students at MIRI study in an energising and collaborative environment with a diverse range of highly skilled researchers and injury prevention practitioners. The program is vibrant and staff and students participate at all levels in mainstream Monash higher degree activities including MIGR Skills Essentials Seminar Series, awards and competitions (e.g. Three Minute Thesis; 3MT), and the Monash Postgraduate Student Association services.

The academic program reflects the unique multi-disciplinary nature of MIRI. Students pursue topics that reflect the breadth of research themes across the Institute, including road safety, occupational health and safety, injury prevention program evaluation, human factors, sports and recreation injury, injury economics, injury biomechanics, disaster resilience and child injury prevention.

State-of-the-art facilities and expert supervisory capacity in areas such as population injury and crash databases, simulation and instrumented vehicles, and statistical analysis/modelling provide students with wide scope for their choice of research methods and approaches. Through their research activities, many students have had opportunities to engage with the international research community in short courses, data collection, conferences and other exchanges.

Highlights

In 2013, there were 34 PhD students, including twelve commencing students enrolled in the graduate studies program. This year also saw the first enrolments in the MPhil program with five new students commencing studies in the Disaster Resilience stream within the Monash University Disaster Resilience Institute.

Scholarship Recipients

A number of highly prestigious awards are available to graduate students on a competitive basis. Recipients of scholarships during 2013 were:

- Institute for Safety Compensation & Recovery Research (ISCRR): Khic-Houy Prang; Maatje Scheepers
- NRMA- ACT Road Safety Trust Postgraduate Scholarship: Belinda Clark
- DSTO-MIRI Foundation: Dianne McGregor
- MIRI Scholarship (Child Safety): Suzanne Cross; Jonny Kuo
- John Lane Memorial Scholarship: Shannon Gray (jointly with APA); Kate Bone
- Australian Postgraduate Award: Tim Lathlean, Gemma Read, Maggie Trotter, Sin-Ki Ng and Brendan Lawrence.
- Peter Vulcan Scholarship: Amanda Warmerdam
- The inaugural Tom Triggs Memorial Scholarship: Sarah Louise Donovan.

This award honours the memory of Professor Thomas Triggs, former Deputy Director of MUARC. Professor Triggs was instrumental in establishing MUARC, one of the most successful research centres not only at Monash University, but in Australia. His development of MUARC’s young driver, driver training and driving simulator research programs have led to the introduction of safety initiatives that have dramatically reduced Australia’s road toll. Professor Triggs died on 7 September 2012 and in recognition of his contribution to the field of driver safety, and as a personal tribute, the Trustees of the Monash University Accident Research Foundation established the Thomas Triggs Memorial Scholarship.

PhD Completions

Congratulations to Hafez Alavi, Lisa Molnar, Roszalina Ramli, Caroline Staines and Miranda Cornelissen who successfully completed their PhDs in 2013.

Pictured left to right: Lei Gryffyod, Serena Xu, Georgina Johnstone.
Scholarly Activities and Awards

MIRI candidates make a significant contribution to the body of scientific evidence on safety issues and injury prevention through scholarly writing. In 2013, students authored eighteen peer reviewed scientific publications based on their PhD research including two book chapters, two conference papers and 14 journal articles.

Trang Vu received the Vice-Chancellor’s Commendation for Doctoral Thesis Excellence for her PhD thesis entitled “Falls prevention in community-dwelling older people with co-morbidity: a targeted approach.”

MIRI’s annual 3MT competition was held mid-year with impressive and engaging presentations by Khic-Houy Prang, Kate Bone and Jonny Kuo. Khic-Houy Prang took out the honours and went on to represent MIRI at the Monash Institute of Graduate Research 3MT Competition.

Miranda Cornelissen and Jonny Kuo were selected to represent Monash University at the Go8 Graduate Research Leaders Workshop in August. They each gave a presentation on “what students expect from Universities for a good PhD experience.”

Saraswathy Venkataraman was awarded a prestigious Endeavour Research Fellowship which will allow her to spend six months in Australia in 2014. During that time Saraswathy will further her PhD research addressing the levels of care provided within long-term aged-care facilities in Malaysia, with a particular focus on injury prevention management policy, regulation and operation.

Honours and vacation scholar programs

Every year MIRI hosts a number of undergraduate students through its supervision of honours and fourth year engineering projects and the vacation scholarship programme. These activities allow undergraduate students to gain experience in research and become familiar with the field of injury prevention.

2013 was a successful year for the MIRI Vacation Student Scholarship Program. The Institute hosted eight students during the summer 2012-2013 program and four winter program scholars, working on a variety of road safety and injury prevention research projects. The program continues to attract a high calibre of candidates and we look forward to growing the program over coming years.

Contributing to further research:

How one family’s donations may save lives

IN 2010, James Cross was killed by a “dooring” incident while cycling to Monash University where he was studying Law/Arts. This term refers to death/injury to a cyclist by a motor vehicle user opening a car door into the cyclist’s path. The James Cross Memorial Fund, auspiced by the Lord Mayor’s Charitable Trust, was established in 2012 by James’ family to raise funds for progressing initiatives in road safety for all road users with a particular emphasis on cycling safety. The proceeds from this fund were donated in 2013 to the Monash University Accident Research Foundation to be used for this purpose.

The Monash University Accident Research Foundation was established in 1996 to provide scholarships available within MIRI for students studying within the principal areas of preventing accidents/reducing injury on the road, in the home, in sport and recreation and at work.

The Foundation has established a range of donation categories for private and public sector donors as well as individuals with resources available for public benefits and beneficiaries of trusts.

Donations exceeding $2 to the Research Foundation are tax deductible and will be used exclusively to support injury prevention research. They will also be acknowledged in the list of donors, published in the Foundation’s Annual Report. Donations of $10,000 or more will contribute to smaller research projects or courses and will be acknowledged in all publications and any associated public events. Framed Certificates of recognition will be presented in each instance.

Donations over $60,000 a year will fund a major research project with naming rights, participation in the public launch and all other events, including acknowledgement in project reports and other publications.

Pictured: James Cross, whose namesake fund provides funding for the Monash University Accident Research Foundation. Photo courtesy of Dr Nicky Martin.
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**MPhil Students 2013**

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<td>Does collaborative planning for General Practices contribute to a more resilient emergency response?</td>
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<td>Craig Ferguson</td>
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<td>Adam Poulter</td>
<td>Professionalisation of the international humanitarian workforce – what are the barriers and opportunities</td>
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<td>Kate White</td>
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**Completed 2013**

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<td>Assessing pedestrian crash risk and injury severity in concentrated urban areas</td>
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<td>Miranda Cornelissen</td>
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<td>Carolyn Staines</td>
<td>The Victorian experience of drowning and its prevention: Historical eco-epidemiological study of drowning prevention in an economically developing community</td>
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Injury Outcomes Research Unit

Individuals respond to both injury and its treatment in different ways. The Injury Outcomes Research Unit (IORU), led by Professor Rod McClure, looks for reasons for these variations with the goal of providing better health care for Australian patients following an injury.

EXPERTISE in this group covers the disciplines of medicine, epidemiology, statistics, psychology, health promotion and population health. Collectively these researchers represent one of the largest population health injury outcomes research groups in Australia – working closely with the Institute for Safety, Compensation and Recovery Research (ISCRR), WorkSafe Victoria and the Transport Accident Commission (TAC), as well as maintaining longstanding collaborative networks with similar groups throughout the world.

Within the IORU, the Trauma Recovery Lab, led by Dr Eva Alisic, aims to find out how children and families recover from traumatic events such as car crashes, the sudden loss of a loved one, disaster, and violence. While most children recover well, between 15 and 20% of those exposed to severe stresses develop persistent post-traumatic stress symptoms. The team collaborates with Royal Children’s Hospital Melbourne and Murdoch Children’s Research Institute as well as international partners. Three projects form the current core of the lab: The Psychological First Aid for Kids study looks at psychosocial care for injured children in hospital Emergency Departments. Over 2000 emergency department staff from over 60 countries completed a survey looking at emergency department staffs understanding of psychosocial care. The findings will be presented in 2014; The Ear for Recovery pilot study is investigating how parents support and communicate with their children after a child has sustained a serious injury. In addition to being interviewed, the children wear an iPod for two days after discharge from the hospital. The iPod audio records snippets of their daily life, improving our understanding of real-life interactions; Finally, the Lab is collaborating on a project in the Netherlands to improve the care for children bereaved by parental intimate partner homicide.

Professor Rod McClure and Dr Sharon Newnam continued their research work on the ARC-Linkage project, titled ‘Determining the individual, community and societal impacts of compensable injury in Australia’. The project aims to develop a detailed understanding of the interactions between critical parties commonly involved in the compensation process. The study is highly collaborative, working closely with industry partners WorkSafe Victoria (WorkSafe), the Transport Accident Commission (TAC) and Comcare. The first phase of the three year study, begun in 2011, has been completed with the second phase starting in 2013 with recruitment of injured people, their employers and case managers to investigate further the compensation process.

Dr Janneke Berecki-Gisolf is leading the ‘Outcomes of Compensated Injury in Victoria’ study. The aim of this ISCRR-funded project is to investigate the impact of chronic disease and pharmaceutical use on the recovery of people injured in road or workplace incidents. The project involves contacting 11,000 TAC and 28,000 WorkSafe clients seeking consent to link their Medicare and the Pharmaceutical Benefits Scheme records to their injury compensation claims records. The linkage will span a period from 12 months before to 18 months following the injury onset. The data will reveal which pharmaceuticals and health services were used and give a general idea of level of health. This project will provide key information on how chronic disease impacts injury outcomes, and recommendations on how to help clients with pre-existing health conditions reach an optimal recovery. Dr Berecki-Gisolf is also working with Professor Rod McClure and Dr Alex Collie, from the ISCRR on projects based on the Compensation Research Database at ISCRR. This database of de-identified injury compensation claims is used to identify determinants of good outcomes, as well as less favorable outcomes, including injury outcomes such as return to work, work disability recurrences, health service use and long-term use of opioids.

Dr Sharon Newnam started a three year study examining 300 organisations in Victoria and NSW that have some form of work-related vehicle use, from those with only occasional vehicle use to those that operate large commercial fleets. One of the hidden aspects of the road toll is the number of people who crash vehicles while at work, with more than 1.4 million work-related vehicles involved in crashes every year, or 27% of all fleet vehicles are involved in crashes annually. Like all car crashes these accidents can have a devastating effect on the driver, passenger and his/her family. Work related car crashes however have the additional effect of lost productivity, lower workplace morale, increased compensation claims and higher insurance premiums for the company.

A major program currently underway is the Transport Accident Commission (TAC) 2015 strategy evaluation program designed to examine all aspects of TAC’s operations, and more specifically, how the strategy will influence client outcomes post-crash, client experience, and scheme viability. Monash researchers, Dr Michael Fitzharris, Dr Swati Shouie, Ms Emily Kerr and Ms Sara Liu, are working with TAC staff to undertake a range of projects including an evaluation of existing remote mental health resources and their potential application within the compensable injury context, as well as an assessment of factors that contribute to common law claims, which are likely to impact most significantly on both client outcomes and scheme viability.
The ageing of the population is one of the major transformations being experienced in Australia, with falls a significant threat to safety, health and independence.

THE Falls Prevention Research Unit (FPRU), led by A/Professor Lesley Day, studies the effectiveness of falls interventions. With a research team trained in public health, epidemiology, psychology, applied statistics and nursing, the FPRU is well placed to study the impact of new interventions and understand the issues associated with implementation of proven interventions.

Of particular importance is the Unit’s access to the Victorian Injury Surveillance Unit (VISU), also within MIRI, which provides unique data on the incidence and cause of falls amongst Victorians. In 2013 VISU published a watershed study in its bi-annual publication for stakeholders which showed that hospital admissions for home injuries surged nearly 40 per cent between 2002/03 and 2011/12. Around 30,000 Victorians were hospitalised in 2011/12 for injuries that occurred in the home at a cost of $228 million. The rapid increase in home injuries has been largely driven by falls, which became a leading cause of injury death between 2009 and 2011, particularly for people aged over 80.

Of 2150 injury deaths a year over the three-year period, 618 or 29 per cent were due to falls compared with 25 per cent as a result of suicide and 16 per cent due to transport accidents. More than a third of the people dying from falls over this period were women aged over 85 and most fatal falls occurred on flat surfaces rather than stairs.

The four-year partnership project Reducing falls among older people in Victoria: better evidence, better targeting, better outcomes, continued in 2013. The aim of this project is to enable a more effective policy response to the falls prevention challenge in Victoria. It is designed to underpin a re-orientation of the Department of Human Services’ falls prevention program and evaluate its delivery. Highlights from this project for 2013 include:

- Identification of the barriers and facilitators for incorporation of falls interventions into the Hospital Admission Risk Program
- Identification of characteristics of group-based and home-based exercise preferred by older people
- Identification of factors that influence older people to discuss falls with their health care providers
- Identification of factors influencing implementation of group-based and home-based exercise programs and home safety assessments through community health agencies
- Completion of data collection for the evaluation of falls prevention interventions being delivered by six consortia of agencies in metropolitan Melbourne
- Presentation of the study results to the State Trauma Committee, the Medicare Locals Aged Care Forum, and to several large groups of health care professionals.

The project, funded by the NHMRC and Victorian Department of Health, is led by A/Professor Lesley Day and includes collaborators at the National Ageing Research Institute, Curtin University, Southern Health, University of Sydney, University of Ballarat and the Victorian Department of Health.

Did you know?

Deaths from falls in people over 75 outnumber the national road toll across all age groups.
Before it is possible to implement strategies to prevent injuries such as playground falls injury, transport injury, alcohol-related violence or farm injury – it is crucial to have a source from which it is possible to determine the size of the problem and when interventions do and do not work.

FUNDED by Victorian Department of Health, the Victorian Injury Surveillance Unit (VISU) is a unique resource that has been operating at Monash University since 1991 providing access to quality Victorian injury surveillance data on injury deaths, hospital admissions and emergency department presentations.

The Unit provides an information and data request service which fields about 200 requests a year for data from a variety of clients, mainly media, researchers and local, state and federal government. Data is used to inform injury prevention policies, stimulate research and to develop and evaluate prevention strategies and measures. These include community awareness initiatives and education, legislative and regulatory changes and safety-related environmental, equipment and product design improvements.

Examples of how VISU works closely with organisations to inform their programs on injury prevention include:

- Providing injury data and indicators for the Victorian Chief Health Officer’s Report
- Working with the Victorian Sports Injury Prevention Taskforce
- Providing child injury indicators to the Department of Education and Early Childhood Development (DEECD) to be used in the Victorian Child and Adolescent Monitoring System (VCAMS)
- Providing injury data and guidance to Local Government to inform community safety plans
- Providing injury data reports to organisations such as Kidsafe Victoria to inform injury prevention initiatives.

Central to VISU’s remit to disseminate injury data and trends is the publication of its E-Bulletin (www.monash.edu/miri/visu) which summarises the year’s death and hospital-treated injury data (overall and by age group) as well as frequency, rates, trends, causes, location, activity, type of injury and body region injured.

The Unit also publishes Hazard, a bi-annual publication examining selected injury issues in depth. In 2013 injury topics covered in Hazard included a settings based analysis of injury data by Ms Angela Clapperton and A/Professor Lesley Day and an overview of injury data related to trampolines, bunk beds and button batteries by Ms Karen Murdoch, Ms Emily Kerr and A/Professor Lesley Day.

The publication is disseminated to over 1,200 subscribers, plus additional key stakeholders and is regularly covered in the national media.
In 2011-2012 there were over 37,000 substantiated cases of severe abuse, neglect and violence against children in Australia with some children dying as a result, according to the Australian Institute of Health and Welfare.

IN 2013, Dr Neercesh Mudaly’s research gained significant attention for her pilot study using animals such as guinea pigs and rabbits, as “therapists” to teach empathy and coping skills to children who have experienced terrible harm from living with severe domestic violence situations.

Dr Mudaly collaborated with WAYSS, a registered not-for-profit community based agency in the Southern Metropolitan Melbourne region, which provides family violence and homelessness support services and transitional housing for women and children. Since 2005, WAYSS in conjunction with an animal therapy consultancy, Empathy Educations & Training (EE&T), has been providing Animal Assisted Therapy (AAT) for children severely affected by family violence and homelessness which results from fleeing the violence. In AAT, the children engage in a series of activities which include animal handling (grooming, comforting), animal care (feeding and observing) and art and photography that complement the activities. The pilot study found that there were significant improvements in many areas of the lives of children who participated. Dr Mudaly is seeking funding for a larger study in this area.

In a collaboration with the Office of the Victorian State Coroner led by the University of Melbourne, MIRI was successful this year in being awarded an NHMRC Partnership Grant to establish the Victorian Suicide Register. The group’s increased research activity in the area of suicide prevention was further enhanced by the commencement of a PhD project exploring the determinants of rail suicide. Initial discussions have begun regarding future research into suicides among medical and emergency response professionals.

Did you know?

Injuries and violence are a major public health issue worldwide and account for nearly 1 out of every 10 deaths every year.
Established in 2012, the Monash University Disaster Resilience Initiative (MUDRI) harnesses expertise relating to disaster resilience across Monash University – with the primary goal of strengthening community-based disaster resilience.

MUDRI aims to provide evidence to shape new approaches to disaster preparedness and management in the context of the Council of the Australian Government’s National Strategy for Disaster Resilience. An important aim is a collaborative approach and interdisciplinary framework to shape all-hazard research which translates research into outcomes that reflect real-world applications for use by government, emergency services and community groups.

In 2013, MUDRI was successful in attaining a competitive grant from the Office of Emergency Services Commissioner and collaborated in two other successful Office of Emergency Services Commissioner grants. Dr Spencer and Dr Natassia Goode began “What is a disaster resilient society? The Victorian context”, which aims to clarify the concept, identify key characteristics of resilient disaster management systems and provide a framework for its measurement in the Australian context.

With Women’s Health Goulburn North East, Ms Debra Parkinson and Ms Claire Zara investigated men’s first person accounts of how they prepared for and responded to the Black Saturday bushfires. This research led to the formation of a Gender in Disasters Taskforce sponsored by the Fire Services Commissioner and was the Winner of a 2013 Victorian Health Promotion Foundation Award.

Finally, in collaboration with the Central Goldfields Shire in Victoria, the “Community Resilience Mentorship Initiative” explored how knowledge can be accessed by local communities in order to enhance their emergency responses and recovery.

The MUDRI Forums continue to grow in strength and reputation. These well-attended events provide a rare and important opportunity for a diverse range of resilience workers ranging from community groups, government agencies, and emergency services to meet and share information, exchange ideas and to support each other to develop this growing sector.

An exciting initiative in 2013 was the successful introduction of the new Master of Philosophy in the Disaster Preparedness and Management Stream. This program provides a unique opportunity for senior emergency managers from Victoria, New South Wales and New Zealand. MUDRI also runs short courses as an alternative pathway for those seeking professional development.
2013 was a year of accomplishment for the Monash University Accident Research Centre (MUARC), directed by Professor Mark Stevenson, with significant new funding from the TAC announced as well as the release of some major reports. MUARC’s research continues to garner international and national attention because of its relevance to real world problems and the fact that it translates this research into policy and, often, legislation.

SOME key highlights from 2013 include:

• The awarding of $7.6 million over three years by the TAC to a team led by Dr Michael Fitzharris for a project called Enhanced Crash Investigation Study (ECIS) as part of the Victorian Government’s strategy to reduce road trauma by 30 per cent by 2022.

• A/Professor Jude Charlton, A/Professor Michael Lenné and Dr Kristie Young, as part of a multi-organisation bid led by the University of NSW, won a major ARC Linkage grant and associated LIEF grant for The Australian Naturalistic Driving Study: Innovation in Road Safety Research and Policy.

• Involvement in a trial by the Victorian Government to address strategies to reduce speeding, including the first study in the world to examine if Intelligent Speed Assist (ISA) devices improve the speed behavior of a group of repeat speeders. The Human Factors team, in collaboration with A/Professor Stuart Newstead and Ms Karen Stephan, evaluated the Repeat Speeders Trial which aimed to test and evaluate two interventions to assist Victorian recidivist speeders to reduce speeding.

• Conducting a 5 day residential Leadership Program which attracted senior management from the World Bank, Victoria Police, New Zealand Police, New Zealand Transport Agency, Traffic Accident Commission, VicRoads and the NSW Centre for Road Safety.

• Signing an agreement with the University of Dammam in the Kingdom of Saudi Arabia which will see MUARC researchers investigating causes of road deaths and injury in Saudi Arabia, which has one of the world’s highest road tolls.

• Strengthening the partnership between the Human Factors team with the Defence Science and Technology Organisation (DSTO) through the signing of a new research agreement (to 2015) and the establishment of a military crew vehicle simulator at MUARC. This facility, which complements MUARC’s existing driving simulators, is supporting staff and PhD student research addressing issues important for current and future army vehicle-based operations such as the impact of extended operations of vehicle crew performance. MUARC staff also supported DSTO in the design and conduct of both laboratory and field studies to better understand army vehicle crew behaviour.

• Dr Nimmi Candappa’s published report on addressing the conflict between motor vehicles and trams at cut-through intersections. The study, undertaken in collaboration with Yarra Trams, looked at the sometimes fatal collisions that happen when motor vehicles complete a u-turn in front of oncoming trams and the changes that could be made to reduce these incidents.

• Welcoming Dr Giovanni Savino from the University of Florence, Italy who is spending two years at MUARC on a prestigious Marie Curie Fellowship studying whether introducing autonomous emergency braking would reduce the risk of motorcycle deaths and injuries in Australia, following a similar study he did in Europe.

• The awarding of a prestigious ARC Linkage grant to Professor Mark Stevenson and Dr Jennie Oxley for a project entitled “Safer Cycling and the Urban Environment” This joint project between MUARC and the Curtin-Monash Accident Research Centre.
(C-MARC) aims to improve the safety of cyclists through identifying enhanced urban road design and evaluating new designs in Australia’s first cycling simulator.

- Continuation of a study investigating the causes of non-fatal motorcycle crashes - involving a case-control study of motorcycle crashes occurring within a 150km radius of Melbourne. The study aims to reveal how the roads and motorcycle riding can be made safer – in an effort to reduce the injuries related to this increasingly popular form of transport.

- Publication in the American Journal of Epidemiology by Professor Mark Stevenson of a study on the causes of truck accidents between 2008 and 2011 in New South Wales and Western Australia: looking at issues ranging from sleepiness; driving experience; payment of rates; use of stimulants to stay awake; health of driver; and truck characteristics such as provision of cruise control, and antilock braking.

- The delivery of the MUARC Annual Lecture on “Road Safety Management in the GDT – Spain” by Dr Maria Segui-Gomez, General Directorate of Traffic.

The Curtin Monash Accident Research Centre (C-MARC) relationship received funding for a further five years to 2019. The C-MARC was established between MUARC and Curtin University in Western Australia to study ways in which road deaths and injuries in WA could be reduced.

The Centre published four issues of the Big Impact newsletter, as a way to ensure our stakeholders keep abreast of MUARC’s latest research. MUARC also undertook some re-branding in an aim to more clearly show our current and future stakeholders where our disciplinary strengths lie. Essentially MUARC’s five research teams were grouped according to unifying disciplines.

These are:

- Statistical Analysis and Transport Data Systems
- Regulation and In-Depth Crash Investigation
- Human Factors in Transport Systems
- Behavioural Science for Transport Safety
- Traffic Engineering and Vehicle Safety

Did you know?

Up to 16% of all crashes on the Victorian and NSW roads is due to driver distraction.
Led by Associate Professor Stuart Newstead, the research team’s expertise lies in highly analytical data-driven safety research, resulting in collaborations with over thirty leading public and private organisations across Australia and internationally.

THE team has specialist expertise in:
- Road safety program evaluation
- Vehicle safety evaluation, monitoring and policy setting
- Police enforcement programs including providing policy and practical advice
- Developing safety programs and countermeasures for vulnerable and high-risk road users
- Injury data systems design, linkage and analysis
- Injury severity metrics.

A/Professor Stuart Newstead and his team collaborated on two reports with Curtin University through the Curtin-Monash Accident Research Centre – “The Relationship Between Socio-economic Factors and Road Safety in WA” and “Modelling the Road Trauma Effects of Potential Vehicle Safety Improvements in the Western Australian Light Passenger Fleet”. The latter study looked at crash data from 2006 to 2012 for West Australian passenger vehicles by fleet type: metropolitan corporate, rural corporate, government and private. The project’s aim was to identify those technologies that – combined with vehicle purchase – could lead to the greatest and most cost effective way to reduce road trauma in WA.

The 21st anniversary of the Used Car Safety Ratings (UCSR), saw the publication of a study updating the ratings which measure the relative safety of vehicles in preventing severe injury to people involved in crashes. The Ratings have been successful for more than two decades because they provide a comprehensive guide giving consumers real-world information on the safety of their current vehicle and any used vehicles they are considering buying. The unique feature of this ratings system is that the information has been collected from real incidents, using police reports and injury compensation claims data collected and analysed over 20 years. As evidence of its popularity the TAC’s “How Safe Is Your Car” website, which was developed to facilitate broad public access to the UCSR results, attracts more than 200,000 individual users every year with a further 100,000 hard copies of the UCSR brochures produced annually.

The team also prepared a submission to the Road Safety Committee of the Victorian Parliament outlining the need for more comprehensive measures of serious road injury in order to more efficiently measure the efficacy of road safety programs. This submission was the culmination of a program of work examining alternative measures of serious injury from road crashes and the data systems required to support their calculation. Research using just such a database was the team’s evaluation of vehicle side airbag effectiveness which was published in the international journal, Accident Analysis and Prevention.
Regulation and In-depth Crash Investigation

Led by Dr Michael Fitzharris, this research team is interested in all matters relating to road and vehicle safety regulations including how decisions are made, formulated and supported through evidence-based science. The team creates and uses comprehensive in-depth crash data, as well as data from hospitals, police and compensation systems to identify current and future safety concerns. Research areas addressed in 2013 include side impact protection, driver distraction, alcohol interlocks and motorcycle safety.

THE team is particularly focused on identifying seemingly intractable and often persistent problems in road safety and developing new ways of overcoming them.

In line with this vision, in 2013 the TAC awarded Dr Michael Fitzharris and his team $7.6 million over three years for a world-first study into the causes of serious injury accidents, called “The Enhanced Crash Investigation Study (ECIS)”. The three year study will look at more than 5,000 pieces of individual information relating to 400 serious injury crashes in Victoria to gain an in-depth understanding of what causes such crashes.

Dr Fitzharris also conducted research that informed the development of a new Global Technical Regulation on Pole Side Impact (GTR 14), which was led by the Australian Government. The GTR was adopted by the United Nations World Forum on the Harmonization of Vehicle Regulations. The regulation will improve the safety of occupants of passenger cars and light commercial vehicles in the event of an impact against pole size objects (i.e. telegraph poles, signposts and trees). In particular, the GTR will also lead to improved protection for occupants in all side impacts as the performance criteria will require effective safety measures such as curtain side airbags, thorax airbags and better crash sensors to be installed in all new vehicles. This is the first time Australia has led development of an international vehicle regulation and the regulatory requirements will be incorporated into Australian Design Rules in the near future.

STC has worked on two large scale motorcycle crash in-depth studies, one led by A/Professor Lesley Day and another in New South Wales by Dr Julie Brown at NeuRA.

The team, led by Dr Julie Brown at NeuRA, along with Dr Michael Fitzharris, and Professor Nigel Taylor from the University of Wollongong, were awarded an ARC Discovery Project to examine the thermal effects of motorcycle protective equipment on rider performance.

Following analysis by Dr Fitzharris of Electronic Stability Control (ESC) in light commercial vehicle models, the Australian Government has mandated the fitment of ESC into all vehicles of this class under the Australian Design Rule 35 from 1/11/2015.

A major study of driver distraction by the group was published in the international journal, Accident, Analysis and Prevention. The study found that one quarter of crashes were associated with driver fatigue or falling asleep, close to 16% of all crashes on Victorian and NSW roads are due to driver distraction, and 13.5% due to alcohol intoxication. The research was based on an extensive assessment of the cars involved in the crash, the road where it happened, interviews with the driver and passengers as well as data from ambulance, police, tow truck drivers and investigators, as well as analysis of pictures taken at the scene. For the first time clues as to driver behaviour at the time of the accident have been collated.

The research group is also involved in two large scale motorcycle crash in-depth studies, one led by A/Professor Lesley Day and another in New South Wales by Dr Julie Brown at NeuRA.

The team, led by Dr Julie Brown at NeuRA, along with Dr Michael Fitzharris, and Professor Nigel Taylor from the University of Wollongong, were awarded an ARC Discovery Project to examine the thermal effects of motorcycle protective equipment on rider performance.

The Regulation and In-Depth Crash Investigation team has strong collaborative links with a number of research groups in Australia. Internationally, the Unit is collaborating with the Motor Vehicle Accident Fund to study of the incidence of road crashes, in particular rollover crashes, in Namibia. Other collaborations are currently underway in the United States with the University of Michigan and Virginia Tech, as well as in the United Kingdom with Loughborough University.
IN 2013 the group had many major achievements that are underpinned through our expertise in the measurement of behaviour using on-road testing, driving simulation, surveys and focus groups, and human factors methods such as task and cognitive task analysis.

In 2013 the team’s research continued to shape road safety practice in areas such as driver distraction and in-vehicle technology. In collaboration with the Statistical Analysis and Transport Data Systems team, the group was heavily involved in a trial conducted by the Victorian Government to address strategies to reduce speeding, including the first study in the world to examine if Intelligent Speed Assist (ISA) devices would improve the speed behaviour of a group of repeat speeders.

The ISA on-road trial results revealed that, while active, ISA is effective in improving the speed behaviour of repeat speeders and that the use of ISA is estimated to yield significant crash saving benefits with this group of drivers, with an overall 12% reduction in crash risk expected. Victorian Minister for Roads Mr Terry Mulder announced in November 2013 that VicRoads will use this research to help develop an in-car technology (ISA) strategy.

In a second major project completed for the Transport Certification Australia (TCA), the team evaluated market-ready, in-vehicle Electronic Work Diaries (EWDs) for future use in the heavy vehicle industry. The evaluation examined the usability, usefulness, and acceptability of EWD systems to monitor heavy vehicle drivers’ hours of work and rest. The goal of the trial was to facilitate behavioural and cultural change to increase driver (and operator) compliance with heavy vehicle driver fatigue legislation and improve road safety outcomes. The results revealed that an electronic system to schedule and monitor...
drivers’ hours of work and rest would be an acceptable option among the majority of the stakeholders in the heavy vehicle industry. A range of design suggestions were made to further improve system usability and to tailor the system to meet the needs of operators and drivers.

In 2013 the Human Factors team carried out a pilot study analysing the road safety issues facing ambulance paramedic personnel, addressing the specific issues resulting from an increasing proportion of novice drivers having to deal not only with the pressures of clinical management, but also with the particular characteristics of driving emergency vehicles in traffic with relatively little driving experience. The results are due for completion in 2014.

Another study of interest that commenced during 2013 was an investigation into the effects of roadside advertising on drivers. This project, part-funded by an Australian government Researchers in Business grant, aims to use cutting edge techniques to establish the level of distraction constituted by billboards in typical urban environments. The results of this study are likely to be of interest to the advertising industry, VicRoads and planning authorities, contributing to the formulation of guidelines for the placement and content of roadside billboards in the future.

The group continues to work with leading road safety centres and human factors experts from around the world. Professor Neville Stanton, Chair in Human Factors in Transport at the University of Southampton and Dr Guy Walker, Lecturer in the School of the Built Environment at Heriot-Watt University in Edinburgh, visited in March as international collaborators on ARC Linkage and Discovery grants held with Associate Professor Paul Salmon at the University of the Sunshine Coast. They worked with the team in human factors modelling research associated with our flagship ARC-Linkage project examining rail level crossing safety. Studies were conducted using the MUARC driving simulator to investigate behaviour at rail level crossings in busy and complex shopping strip environments. The research was presented to stakeholder groups, including the Victorian Railway Crossing Safety Steering Committee. This research will significantly influence practice in this area and will address Coronial recommendations released in October, 2013 aimed at preventing death and injury at these crossings. This research continues, with the goal for 2014 being to generate new design concepts for rail level crossings.

Did you know?

Driving five kilometres over the speed limit in a 60 km/h zone is equivalent to driving with a blood alcohol level of 0.05. Driving 10 km over the 60 km/hour speed limit quadruples the risk of a crash.
ONE in four Australians will be over 65 by the year 2056, making the team’s focus on addressing key transportation issues amongst the elderly highly relevant. There has been a significant level of national and international interest in the Team’s Candrive/Ozcandrive study which focuses on the safe mobility of older adults. The five year longitudinal study, funded through the ARC Linkage Scheme, is following the health and driving patterns of more than 1200 drivers over the age of 75 in Australia, Canada and New Zealand. The study is the largest and most comprehensive of its kind and has enlisted the assistance of new technologies to monitor the real-world driving patterns of drivers over the course of the study to determine how their driving changes over time; how the patterns in their driving change; and how declining health and functional ability can impact on driving.

Key outcomes will be the development of an effective Decision Rule to assist health-care professionals in identifying at-risk drivers as well as a tool for the objective monitoring of on-road driving which may be the basis of a suitable ‘local-area’ license test. A sub-project, led by Dr Sjaan Koppel, is recording objective driving behaviour using a novel computer-based Driver Observation Schedule (eDOS), designed by the MUARC team and project partners, to monitor changes in individuals’ everyday driving performance in their own car and on familiar routes.

During 2013 a special issue of the journal Accident, Analysis and Prevention featured a number of scientific papers with early findings from the study.

Another focus of the team’s research activities is child safety in cars. This research is funded through an Australian Linkage Council grant (with industry partners VicRoads, TAC, RACV and ProQuip and Britax) in collaboration with international partners in the US and Sweden, and supports two PhD students, Mr Johnny Kuo and Ms Suzanne Cross. The project implemented a large-scale national survey of parents and innovative naturalistic driving methods used to observe children as rear seat occupants during real world car trips. Specifically, this project will quantify the positions of children travelling in child restraints, booster seats and seatbelts, and will identify the injury effects of out-of-position status and its impact on driver distraction.

In addition, a number of research projects were conducted addressing issues surrounding young drivers, and high risk driving activities.

Cycling safety is also an area of research undertaken by team members and a naturalistic cycling study was conducted in the ACT, funded by NRMA-ACT Road Safety Trust. This study investigated the behaviour of cyclists and their interactions with other road users and the cycling environment in the ACT using naturalistic observational methods, developed at MUARC, and extending studies completed with Melbourne commuter cyclists. The team is also involved in the “Safer Cycling in the Urban Environment” project led by Professor Mark Stevenson. The research is being funded by APC Linkage Grant, VicRoads, TAC, Main Roads WA, Amy Gillett Foundation and the Cycling Promotion Foundation. This current project takes an innovative, multi-disciplinary approach to understand the issues contributing to cyclist injury with a particular focus on the urban road environment.

In collaboration with partners from Monash University Malaysia, researchers in the team continued their work with the Social Security Organisation within the Malaysian Ministry of Human Resources finalizing an innovative, systems-based training program, the “Safer Motorcycling to and from Work” program, in an effort to reduce commuter motorcycle crashes in Malaysia.
Led by Professor Brian Fildes, this team comprises research engineers with industry and academic experience in civil and mechanical engineering. The team of Dr David Logan, Ms Nimmi Candappa, Mr Brendan Lawrence and Mr Steven O’Hern, focuses on work related to the development and evaluation of safe road infrastructure particularly research around intersection design, roadside barriers and vehicle safety.

As part of the research team’s commitment to making the roads safer, Ms Candappa is studying how wire rope barriers can prevent injuries and deaths. Six out of every 10 deaths on Victorian roads last year occurred in rural areas. The study found that wire rope barriers result in significant reductions in the risk of both serious injury and death – of up to a staggering 87% reduction. Extrapolated to annual crash saving rates, this translates to around 43 fewer casualty crashes on the Eastern Freeway and eight fewer on the Hume Highway per year. With respect to serious injury, indicative serious injury crash savings per year were 15 for the Eastern Freeway and six for the Hume Highway.

Intersection safety was investigated in a major study headed by Dr Bruce Corben and Dr David Logan with other TEVS team members. In the last decade, about 100,000 people have been seriously injured or killed in intersection crashes in Victoria alone. Intersection safety, therefore, is recognised as a major concern. A key research area in this group is a Victorian Government-funded study focusing on improving intersection safety through infrastructural design.

A study involving the TEVC team Dr Bruce Corben, Dr David Logan, Dr Jennie Oxley among others, examined pedestrian safety improvements. Walking is a sustainable mode of transportation of benefit to both individuals and to the broader community. Significant personal health, economic and social benefits can be derived from safe walking. The study showed that there has been as significant reduction in pedestrian deaths in Victoria between the late 1980’s and 2013.

The team is also involved in the ARC Linkage project, “Safer Cycling in the Urban Environment“, focusing on the development of urban prototypes with the potential to reduce the number of cyclist collisions.
# Statement of Income and Expenditure

From 1 January 2013 to 31 December 2013

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## Balance as at 1st January 2013

1,394,282

## INCOME

11,797,220

### DEEWWR

Research:

- Australian Research Council: 854,843
- National Health and Medical Research: 283,611
- State Government Research: 4,421,958
- Commonwealth Government Research: 362,323
- Industry Australia Contracts: 440,117
- Industry Australia Grants: 176,899
- Australian Industry Donations: 37,531
- Industry International Research: 305,974
- Industry International Competitive Research: 159,431

Commercial: 605,240

### Internal Grants (Monash Research Support/Strategic Initiatives)

1 2,748,354

### Other (Including incl Sale of Assets, Student Fees, Transfers)

197,140

## EXPENDITURE

11,068,903

### Salaries and Related Expenditure

6,504,597

### Financial and Administration

2 457,204

### Student Related

236,485

### Infrastructure Related

283,115

### Central Support Services – Overhead Costs

2,668,954

### Other Operating Expenditure

868,548

### Capital Expenditure

0

### Contract Recoveries

60,000

## Balance as 31st December 2013

2,122,599

## Notes:

1. Accommodation and other services which were previously supplied as in-kind support have been replaced as Central Support Services - Overhead Costs. The University has also provided a transfer of funds to part offset these charges.

2. Includes payments to consultants.

The Institute's Statement of Income and Expenditure has been certified to be in accordance with the Universities Accounting and Financial Reporting System by the Office of the Vice-President and CFO. Where required as a condition of funding grants, accounts will be audited by independent external auditors. They have been subject to Government audit as part of the University’s annual accounts for the calendar year 2013.

Footnote: It should be noted that the Centre operates on a calendar financial year and its revenue and expenditure are, for the most part, project related and several projects cross fixed reporting periods and financial years. The apparent “surplus” mostly reflects grant and contract income received in 2013 for expenditure that will be incurred in 2014.

Certified Correct.

JOEL CHIBERT
Director, Research and Revenue Accounting Services