Department of Civil Engineering
Annual Report 2013

Photography by Greg Ford
VISION

Global leaders in education and research innovation with societal relevance and impact

MISSION

Building a better future through innovative and resilient solutions to societal problems
Equipping the future leaders of society with the skills to meet the demands of tomorrows problems

RESEARCH THEMES

Energy, water and resources
Monitoring, prediction and protection
Resilience, infrastructure and society
DEPARTMENT OF CIVIL ENGINEERING
2013 ANNUAL REPORT

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1. HIGHLIGHTS IN 2013

Staff Awards and Achievements

The 2013 Departmental Annual Dinner was held on 19th June. The dinner encompassed the appreciation of industry and guests who are supporting the department; the undergraduate and departmental awards; the alumnus of the year award; and also facilitated the reunion of our past alumni. Mr Paul Hardy, CEO of Aurecon, was awarded our Alumnus of the Year for 2013 and gave an after dinner address.

Ms Irene Sgouras won the Departmental Professional Staff Member Award in June 2013.

Congratulations to Professor Jayantha Kodikara on receiving both the Vice-Chancellor’s Award for Innovation and Engagement and the Dean’s award for Innovation and External Engagement. Well done!

Professor Malek Bouazza was awarded the International Geosynthetics Society Plaque. The award is for significant contributions to the International Geosynthetics Society and outstanding technical contribution to the geosynthetics discipline. Only 7 plaques were awarded since 1982 and this is the first time to an Australian. Well done!

Congratulations to Professor Bill Young on receiving the 2013 Contribution to the Profession Award from the Institute of Transportation Engineers (Australia and New Zealand).

Congratulations to A/Prof. Ranjith Pathegama Gamage on receiving his promotion to Professor, effective 1 January 2014. Ranjith was also elected a Fellow of the American Society of Civil Engineers (ASCE) in 2013.

Congratulations to Dr Majid Sarvi on receiving his promotion to Associate Professor with effect 1 January 2014.

Congratulations also to the following lecturers who were promoted to Senior Lecturer:

Dr Chris Rudiger and Dr Armin Heidapour

Professor Xiao-Ling Zhao received the 2013 International Institute of Welding Thomas Medal in recognition of his outstanding contributions and achievements in the field of Tubular Structures, especially his leadership in developing ISO 14346 and ISO 14347 standards.

AWS (American Welding Society) President Mrs Nancy Cole and Prof. Xiao-Ling Zhao at the Opening Ceremony of the 66th IIW Annual Assembly on 14 September 2013, Essen, Germany

Congratulations to Dr Daniel Viete on receiving the Fullbright Victoria Scholarship. Daniel will go to the University of California in Santa Barbara for 12 months to study the geology of deep earthquakes.

Fullbright Scholarship recipients, Parliament House, Canberra
HIGHLIGHTS IN 2013

Professor Frieder Seible, our new Dean of Engineering, commenced on 1 April 2013 from the Jacobs School of Engineering, University of California San Diego. He is a structural engineer with expertise in bridges, earthquakes and terrorist attack.

Research Achievements

Congratulations to Dr Amin Heidarpour on being awarded the Research Fellowship for International Young Scientists funded by the Natural Science Foundation of China.

Congratulations to Dr Wenhui Duan on receiving the Departmental Award for Excellence in Research at our Annual Dinner in June 2013.

The department received 12 Seed grants, two ARC Discovery grants, two ARC Linkage Grants and two DECRA grants in 2013.

Congratulations to Dr Valentijn Pauwels on receiving a Future Fellowship for his project “A novel and theoretically consistent method for correcting systematic errors in earth observation data and earth system model results”.

Congratulations to Dr David McCarthy on being awarded a DECRA for his research into “Interactions between plants and faecal pathogens in urban water treatment: significance of soil microbes, plant debris, root exudates and rhizosphere”.

Congratulations to Dr Chunhui Lu on receiving the National Centre for Groundwater Research and Training (NCGRT) Research Award for his work within the centre.

We had 18 PhD completions in 2013.


Dr Changxi Zheng and Dr Wenhui Duan achieved a DECRA for “Probing interaction between cement and nanoparticles at micro/nano scale”. Well done Wenhui!

An outcome of the Departmental Retreat held in November 2012 was establishment of the following new research themes:
- Energy, water and resources
- Resilience, infrastructure and society
- Monitoring, prediction and protection.

Five staff from the department presented at the 2013 Tri-University Research Workshop on Advanced Engineering, which was hosted by Monash University on 9-10 December 2013 at Clayton campus. In its ninth year, this workshop aims to provide a platform for Monash University, Central South University (CSU) and Wuhan University of Technology (WUT) to exchange engineering research discoveries, explore innovative topics, and consolidate international partnerships in joint research and engineering education.

Education Achievements

Prof Geoff Rose was presented with the Departmental Award for Excellence in Teaching at our Annual Dinner in June 2013.
Departmental Teaching Fellows for 2013 were acknowledged at the Annual Dinner for their contribution to our teaching program.

We commenced a new mining degree in 2013 with 25 students entering 1st Year of Mining Engineering, four students transferring into 2nd Year and three students transferring into 3rd Year. We expect to have our first graduation in 2014. Professors Jerry Tien and Jian Zhao and Dr Mohan Yellishetty have joined the department to run the mining program, with plans to further grow our mining staff.

The Monash joint PhD program with Indian Institute of Technology – Bombay (IITB) is going well. We have had our first graduate, and started five more students in the mid-year intake.

The new building incorporating civil program at our Sunway campus in Kuala Lumpur is due for completion in Jan 2014. Four new staff have been appointed in the areas of water, geo, structures and construction management.

A full curriculum review has been completed, leading to some rejuvenation of units.

The Institute of Transport Studies (ITS Monash) commenced a Joint Masters of Transportation Systems with Southeast University (SEU) School of Transportation Engineering in Suzhou, China in 2013. Dr Russell Thompson and Dr Terry Liu taught the inaugural in-take of 21 students.

Dr Terry Liu with the joint transport masters students

March 2013 Mining Engineering students

The department underwent an audit for our Institute of Engineers Australia IEAust accreditation in March 2013. Some of the commendations included the enthusiasm of the staff and students, the strong engagement and support of industry, the technical strength of our programs and students, our well-equipped laboratories, the consistency in our high enter scores, the strong female student demand, the quality and age profile of our staff and the breadth and innovation of our double degrees, especially BE/BArch.

Events

We returned to Clayton Bowls Club for our 2013 Christmas party, this time without the rain!
HIGHLIGHTS IN 2013

The annual staff v's students soccer match was held on 20 December 2013 and, dare I say, the staff were victorious...again!! The match was followed by a BBQ lunch provided by the Postgraduate Committee.

Vale Paul Grundy

One of our engineering greats, Emeritus Professor Paul Grundy sadly passed away on 6 January 2013. Paul graduated with a Bachelor of Civil Engineering in 1957, and went on to complete a Master of Engineering Science in 1960 at the University of Melbourne. He then travelled to the UK where he undertook a PhD at the University of Cambridge. Paul worked in the industry for a brief period, but academia and research were his calling. Joining the Department of Civil Engineering at Monash in 1966, he went on to serve as Chair of Department from 1996 to 1998. Paul retired in 2000 and became Emeritus Member of the College of Structural Engineers Australia and Honorary Associate of the International Association for Bridge and Structural Engineering. In 2008 he was made a Member of the Order of Australia and in 2012 was awarded the Anton Tedesko Medal from the International Association for Bridge and Structural Engineering (IABSE) for his contributions to the research of the lifetime performance of structures in hostile environments and disaster risk reduction.

Industry Engagement

We wish to thank Mr Colin Jordan (RACV) for serving as Chair of our Industry Advisory Committee for over 10 years. Mr Colin Jordan, Mr Brian Wrench (Golder Associates) and Mr Swee Mak (CSIRO) decided to step-down from the IAC in 2013 and we thank them for their long-standing contribution and efforts over the years.

The Industry Advisory Committee elected Mr Ian Pitcher (AECOM) as the new IAC Chair in June 2013, and welcomed the following new members:
- Mr John Bahoric (Arup)
- Dr Gamini Adikari (SMEC)
- Dr Julian Seidel (Foundation Specialist Group)
- Dr Chris Haberfield (Golder Associates)
- Dr Bruce Brown (Rio Tinto)
- Mr Dusha Dayananda (Wood Group PSN)
- Ms Anita Curnow (VicRoads)
- Dr David Flower (Melbourne Water)

We very much look forward to meeting with them in future and their input to the IAC.

Ms Joan Ko (environmental engineer with Arup and Civil Engineering Teaching Fellow) received the early career alumni award at the Faculty of Engineering Alumni Relations function in October 2013.
2. OUR PEOPLE

2.1 Management Committee

In 2013, the Management Committee of the Department consisted of:

- Prof. Jeff Walker  Head of Department
- A/Prof. Bill Wong  Director of Teaching
- Dr Edoardo Daly  Director of Research
- Dr Yu (Barry) Bai  Director of International Affairs
- Mr Christopher Powell  Director of Resources

Meetings of the Management Committee were held monthly.

2.2 Industry Advisory Committee

The Industry Advisory Committee was created in 1999. In 2013 we conducted a review of members and Mr Colin Jordan, Dr Swee Mak and Mr Brian Wrench stood down. Eight new members commenced, being Dr Gamini Adikari, Mr John Bahoric, Dr Bruce Brown, Ms Anita Curnow, Mr Dusha Dayananda, Dr David Flower, Dr Chris Haberfield and Dr Julian Seidel. Meetings of the Committee were held on 19th June and 27th November 2013 at the Clayton campus. The membership of the Committee was as follows:

**Industry members:**

- Dr Gamini Adikari  Technical Principal of Dams, SMEC
- Mr John Bahoric  Arup
- Dr Bruce Brown  Rio Tinto
- Mr Chris Chesterfield  General Manager of Waterways, Melbourne Water
- Mr Murray Cullinan  Executive Director MPD, Dept Transport & Local Infrastructure
- Ms Anita Curnow  Director of Network Strategy & Planning, VicRoads
- Mr Dusha Dayananda  Associate Civil/Structural Engineer, Wood Group PSN
- Dr David Flower  Senior Business Analyst, Melbourne Water
- Dr Chris Haberfield  Principal, Golder Associates
- Ms Ann Kollmorgen  Project Hydrogeologist, Dept of Environment & Primary Industries
- Dr Tony Ladson  Director, Moroka Pty Ltd
- Dr Rory Nathan  General Manager, Technology & Practice, Sinclair Knight Merz
- Mr Jim Papadimitriou  Transport Services Leader, Aurecon
- Mr Ian Pitcher  Industry Director (Environment), AECOM
- Dr Bronwyn Ridgway  Consultant – Environmental Engineering
- Dr Julian Seidel  Technical Director, Foundation Specialist Group
- Mr John Sturdy  Director, Spencer Stirling
- Mr Geoff Taplin  Consultant – Structural Engineering

**Departmental members:**

- Prof. Jeff Walker  Head of Department
- A/Prof. Bill Wong  Director of Teaching
- Dr Edoardo Daly  Director of Research
- Dr Yu (Barry) Bai  Director of International Affairs
- Mr Christopher Powell  Director of Resources

2.3 Heads of Section

In 2013, the Heads of Sections were as follows:

- Dr Asadul Haque  Head of Geomechanical Engineering
- Prof. Jerry Tien  Head of Mining Engineering
- A/Prof. Frank Collins  Head of Structural Engineering
- Dr Majid Sarvi  Head of Transport Engineering
- Dr Valentijn Pauwels  Head of Water Engineering

Meetings of the Heads of Section were held quarterly, twice combined with the Management Committee meetings.
2.4 Executive Committee

The departmental Executive Committee was created in 2012 and consists of all Professors as well as the Deputy Head of Department. Membership of the committee in 2013 was as follows:

Prof. Jeff Walker Chairperson
Prof. Malek Bouazza
Prof. Graham Currie
Prof. Ana Deletic
Prof. Jayantha Kodikara
Prof. Geoff Rose
Prof. Jerry Tien
Prof. Bill Young
Prof. Jian Zhao
Prof. Xiao-Ling Zhao
A/Prof. Bill Wong (Deputy Head)

Meetings of the Executive Committee were held quarterly.

2.5 Occupational Health and Safety Committee

The Civil OHS Committee was created in 2008. Membership of the committee in 2013 was as follows:

Prof. Jeff Walker Chairperson
Mr Mike Leach Deputy Chairperson and Safety Officer
Mr Chris Powell Deputy Safety Officer
Dr WenHui Duan
Dr Rao (Martand) Singh
Mr Richard Williamson OHS Representative
Mr Mark Taylor Deputy OHS Representative
Ms Emily Payne Postgraduate Representative
Mr Alastair MacLeod Postgraduate Representative

Meetings of the Civil OHS Committee were held bi-monthly.

2.6 Research Groups

In 2013 the department operated through the following five groups:

2.6.1 Geomechanical Engineering

The geomechanics group was led by Dr Asadul Haque and included Professor Malek Bouazza, Professor Jayantha Kodikara, A/Prof. PG Ranjith, Dr Ha Bui, Dr Will Gates, Dr Pathmanathan Rajeev, Dr Dilan Robert, Dr Rao Martand Singh, Dr Daniel Viete, Dr Samintha Perera, Mr Yilin Gui, Mr Mike Leach, Mr Phil Stevens.

Research Strengths: CO₂ sequestration; environmental geotechnics; geo-infrastructure; geothermal energy; soil and rock stabilisation; unsaturated soils; modelling of geomaterials.

2.6.2 Mining Engineering

The mining group was created in 2013 and was led by Professor Jerry Tien and included Professor Jian Zhao and Dr Mohan Yellishetty.

Research Strengths: Mine ventilation; methane and dust control; dpm emission control measures; mine fires and firefighting; mine emergency planning; fundamental and applied researches of rock mechanics and tunnelling technology; rock fracturing mechanism and failure strength under dynamic loads; deep rock geothermal energy and induced seismicity; mine reclamation; environmental impacts and management due to mining.
2.6.3 Structural Engineering

The structures group was led by A/Prof. Frank Collins and included Professor Xiao-Ling Zhao, A/Prof. Bill Wong, Dr Con Adam, Dr Yu (Barry) Bai, Dr Colin Caprani, Dr Wenhui Duan, Dr Amin Heidarpour, Dr Hongbo Liu, Dr Ye Lu, Dr Lizi Sironic, Dr Chao Wu.

**Research Strengths:** Advanced thin-walled structures; FRP composites; non-Portland cement based sustainable concrete alternatives; impact and blast; fire engineering; lifetime integrity of structures; timber structures; structural health monitoring.

2.6.4 Transport Engineering (inc. Institute of Transport Studies Monash)

The transport group was led by Dr Majid Sarvi and included Professor Graham Currie, Professor Geoff Rose, Professor William Young, Dr Alexa Delbosc, Dr Marilyn Johnson, Dr Zhiyuan (Terry) Liu, Dr Nirajan Shiwakoti, Dr Amir Sobhani, Dr Russell Thompson, Mr John Clements, Mr Omid Ejtemai, Ms Pauline Forbes, Mr Bill Kilpatrick, Ms Brenda O’Keefe.

**Research Strengths:** Multimodal urban transportation system planning; modelling and optimisation; transport system sustainability; resilience and human interface modelling and analysis.

2.6.5 Water Engineering

The water group was led by Dr Valentijn Pauwels and included Professor Ana Deletic, Professor Jeff Walker, Dr Edoardo Daly, Dr Peter Breen, Dr Matteo Camporese, Dr Cintia Dotto, Dr Gift Dumedah, Dr Stefania Grimaldi, Dr Samantha Grover, Dr Belinda Hatt, Dr Rebekah Henry, A/Prof. Robert Keller (Adjunct Research Associate), Dr Chunhui Lu, Dr David McCarthy, Dr Alessandra Monerris-Belda, Dr Gavin Mudd, Dr Chris Rüdiger, Dr Christian Urich, Mr Anthony Brosinsky, Mr Peter Kolotelo, Mr Tim Lubcke, Mr Peter Poelsma, Ms Christelle Schang, Mr Richard Williamson, Mr Frank Winston, Mr Yaron Zinger, Mrs Louisa John-Krol.

**Research Strengths:** Modelling and monitoring of stormwater quality and treatment; water filtration and treatment technologies (including biofiltration); water sensitive urban design and integrated urban water management; stormwater harvesting; ecohydrology; groundwater modelling; life cycle assessment of water (mining, urban etc.); stochastic soil-moisture dynamics and water balance; soil-atmosphere interaction; constructed wetlands; environmental remote sensing; land surface modelling and data assimilation.

2.7 Staff List

**Professors**
Abdelmalek Bouazza CivIng Algiers PhD Glasgow FIEAust
Graham Currie BSc(Hons) Huddersfield MSc Cranfield PhD Monash MCIT
Ana Deletic BSc(Hons) MSc Belgrade PhD Aberdeen GradCertHighEd Monash MIWA MIAHR FIEAust FTSE
Jayantha Kodikara BSc(Hons) Peradeniya PhD Monash FIEAust CPEng
Geoffrey Rose BEng(Scotland) MSc PhD Northwestern MIEAust MITE MAITPM
Jerry Tien PhD, MBA, PE
Jeff Walker BE(Hons) BSc(Hons) Newcastle PhD Newcastle FIEAust
William Young BE(Hon) NSW MSc PhD Monash GradDipMgt MBA Deakin FIEAust FITE FCIT MAITPM MPAA
Jian Zhao BSc Leeds PhD DIC London FIEAust
Xiao-Ling Zhao BE ME Shanghai Jiao-Tong PhD DEng Syd EMBA NSW & Syd FIEAust FASCE FIIFC MSSRC

**Associate Professors**
Frank Collins BE MEngSc Syd PhD Monash MIEAust CPEng
Ranjith Pathegama Gamage BSc(Eng)(Hons) Moratuwa PhD Wollong MASCE CHARMA FIEAust MISRMI (ARC Future Fellow)
Man Bui (Bill) Wong BSc(Eng) London PhD UNSW CEng MICE FIEAust CPEng
 OUR PEOPLE

Senior Lecturers
Yu (Barry) Bai BE(Struct) Tsinghua MEng(Struct) Tsinghua PhD EPFL
Edoardo Daly BE ME Turin PhD Turin GradCertHighEd Monash
WenHui Duan BE Tianjin MEng Tianjin PhD NUS
Asadul Haque BScEng KBIT MEng AIT PhD Wollong GradCertHE Monash MIEAust
David McCarthy BSci BE(Hons) PhD Monash
Gavin Mudd BEnvEng(Hons) RMIT PhD VUT MSSEE MAusIMM MSEG MISIE
Valentijn Pauwels B AgrEng UGent MACivEng Princeton PhD CivEng Princeton
Majid Sarvi BCivEng(Hons) Tehran MEng(Hons) IUST PhD Tokyo MJSCE MJSTETTSC MCITE
Russell Thompson BAppSc RMIT, MEngSc Monash, PhD Melb
Mohan Yellishetty BE Osmania M Tech IIT Bombay PGDEM Uni Hyd PhD Monash MAusIMM (CP), ASAIMM
Yibing Wang BSci (EE) Sichuan ME (Control) Chongqing PhD (Control) Tsinghua

Lecturers
Ha Hong Bui BE(Hons) HCMUT MEng Rits PhD Rits
Colin Caprani PhD UCD BSc(Eng) TCD DipEng DIET CEng CPEng MIEAust MIEI MIABSE MASCE MiStructE
Belinda Hatt BAppSci(Hons) RMIT PhD Monash
Amin Heidarpoor BSc IUT MSc Sharif PhD UNSW
Zhiyuan (Terry) Liu B TransEng(Hons) SEU PhD NUS
Chunhui Lu BEng UTS MEng SJTU PhD Gatech
Ye Lu BE ME BUAA PhD Sydney
Christoph Rudiger BE(Hons) PhD Melbourne
Nirajan Shiwakoti BCivEng Tribhuvan MEng(Hons) Hokkaido PhD Monash

Senior Tutor
Elizabeth Sironic BE DIC MSc PhD Monash

Senior Research Staff
Constantine Adam BEngSc MEngSc Monash PhD AIWS
Peter Breen
Will Gates BSc MSU MSc NMSU PhD Illinois
Marilyn Johnson BA(Hons) MAppSocRes PhD Monash
Bill Kilpatrick GradCert Risk Monash MRiskM Monash MRMIA

Research Fellows
Matteo Camporese MEng UNIPD PhD UNIPD
Alexa Delbosc BA Lewis & Clark MA Harvard PhD Monash
Gift Dumadah BSc(Hons) KNUST MSc SFU PhD Guelph
Samantha Grover BSc BA Melb Bsci(Hons) LaTrobe PhD LaTrobe
Rebekah Henry BSc (Hons) Griffith University PhD Monash University
Hongbo Liu BE Harbin MSc Nanyang PhD Monash
Alessandra Monerris-Belda BE Valencia PhD Catalunya
Samintha Perera BSc(Hons) Peradeniya MEng Saitama PhD Monash
Pathmanathan Rajeev BSc Peradeniya MSc Pavia PhD Pavia
Dilan Robert BSc (Hons) UOM PhD Cambridge MIMarEST
Rao Martand Singh BE(Civil)Vyas Jodhpur M Tech(Geotech) IIT Delhi PhD Cardiff
Amir Sobhani BSc MSc FU Mashhad PhD Monash
Christian Urich DipEng Innsbruck
Daniel Viete BSc BE(Hons) Monash PhD ANU

Research Officers
John Clements BCom(Hons) Dip Ed Melb MEC MAdmin Monash
Cintia Dotto BE PhD Monash
Omid Ejtemai DipIT Darmstadt
Pauline Forbes
Stefania Grimaldi ME CivEng PhD PUTurin
Yilin Gui BE CSU AusIMM
Peter Kolotelo BSc Masters
Tim Lubke BSc (Biodiversity and Conservation) Flinders
Peter Poelisma BSc (Environmental) RMIT
Christelle Schang BEng
Chao Wu BE Tongji PhD Monash MIIFC MIABMAS
OUR PEOPLE

Administrative Staff
Narelle Ayson – Executive Assistant to HOD
Tara Fry – Resources Officer
Mrs Louisa John-Krol – Personal Assistant to Ana Deletic, Administrative Officer, MW4L
Jenny Manson – Research & Postgraduate Manager
Brenda O’Keefe – Administration Manager, ITS (Monash)
Chris Powell – Director of Resources
Irene Sgouras – Undergraduate Studies Administration Manager

Technical Staff
Anthony Brosinski – Technical Officer
Zoltan Csaki – Technical Officer
Glenn Davis – Technical Officer
Jeffrey Doddrell – Technical Officer
Peter Dunbar – Technical Officer
Long Kim Goh – Laboratory Manager
Michael Leach – Technical Officer
Kevin Nievaart – Technical Officer
Alan Taylor – Technical Officer (Stores)
Mark Taylor – Senior Technical Officer
Richard Williamson – Senior Technical Officer
Frank Winston BE(Hons) MEngSc – Senior Technical Officer

Honorary Members of the Department

Adjunct Professors
Riadh Al-Mahaidi  BSc(Civil Eng)(Hons) Baghad MSc Cornell  PhD Cornell  FIEAust MASCE CPEng
Tim Fletcher BForSc(Hons) Melb, PhD Melb
Masoud Motavalli  PhD ETH-Zurich
Ronald Kerry Rowe, BE(Hons) Sydney,  PhD Sydney, DEng, Sydney, FREng, FRSC, FCAE, FEIC, FACE, FIEA, FCSE, PEng
Ahmad Shayan  BAgEng, Cert Hydrology & Groundwater Eng, Post-grad Dip(Soil Sc), PhD(Soil Sc)
Chien M Wang  BE(Civil)(Hons) Monash MEngSc Monash PhD Monash

Adjunct Research Associates
Sing Ki (Xavier) Choi  BE(Hons) PhD GradDip Computing
Christopher Haberfield  BSc Sydney BE(Civil) Sydney  PhD FI Aust MAGS MISRM MISSMGE
Robert Keller  BE(Hons) PhD Canterbury NZ MASCE MIAust MIPENZ
Anthony Ladson  BE(Hons) Melbourne MSc Minnesota  PhD Melb GradCertHighEd
Julian Seidel  BE(Hons) PhD MIAust CPEng
Geoffrey Taplin  BE(Hons) Tas. MEngSc PhD CP Eng NPR MICE MStructE MIAust
Peter Erwin Weinmann  DIPIng ETH Zurich MEngSc MIAust CP Eng

Adjunct Senior Lecturer
Richard Knight
John Smith

2.8 Staff changes in 2013

New Staff members
Professor Jerry Tien
Miss Tara Fry
Dr Colin Caprani
Dr Yilin Gui
Dr Amir Sobhani
Dr Chao Wu

Profesor Jian Zhao
Dr Matteo Camporese
Dr Stefania Grimaldi
Dr Chunhui Lu
Dr Christian Urich
Dr Mohan Yellishetty
Promotions (effective 1 January 2014)
A/Prof. PG Ranjith (from A/Prof to Professor)
Dr Chris Rüdiger (from Lecturer to Senior Lecturer)
Dr Amin Heidarpour (from Lecturer to Senior Lecturer)

Resignations / Departures
Yibing Wang – Senior Lecturer
Tim Lubcke – Research Assistant
Glenn Davis – Technical Officer
Kevin Nievaart – Technical Officer

Retirement
Nil.

2.8 Visitors to the Department

The following visitors came to Civil Engineering at Monash University in 2013:

Visiting Academics
Dr Balvant Rajani, of Rajani Consultants Inc, visited the department Jan-Feb. Hosted by Professor Jayantha Kodikara.
Dr Qinglei Yu, of Northeastern University, Shenyang PR China, visited the department January. Professor Pengfei Fang of Ningbo Institute of Technology, Zhejiang University China, visited between February 2013 and February 2014. Visit hosted by Professor Malek Bouazza.
Dr Estela Garacez of Federal University of Pelotas, Brazil, visited the department between January and March. Visit hosted by A/Prof Frank Collins and Dr Will Gates.
Professor Huihai Liu of National Library (LBNL), University of Californai, Berkley, visited during March. Visit hosted by A/Prof PG Ranjith.
Professor Kerry Rowe of Queen’s University Kingston, Canada, visited the department in April. Visit hosted by Professor Malek Bouazza.
Dr K Ram Chandar of NITK Surathkai (Govt of India), visited the department between May-July. Visit hosted by Dr Mohan Yellishetty.
Professor Jeff Packer of University of Toronto, visited the department in May. Visit hosted by Professor Xiao-Ling Zhao.
Dr M. E. Raghunandan, of Monash University (Sunway Campus) visited in May. Visit hosted by Professor Jeff Walker.
Dr Amin Talei of Monash University (Sunway Campus), visited in May, hosted by Professor Jeff Walker.
Professor Chengqing Wu, of University of Adelaide, visited the department in May. Visit hosted by Professor Xiao-Ling Zhao.
Professor C M Wang, of National University of Singapore, visited the department in June. Visit hosted by Dr Wenhui Duan.
Dr Hans Lievens of Ghent University, Belgium, visited the department July-August. Visit hosted by Dr Valentijn Pauwels.
Professor Harry Vereecken, of Agrosphere Institute, Forschungszentrum, Jülich GmbH, Jülich, Germany, visited the department in July. Visit was hosted by Dr Valentijn Pauwels.
Professors Sing Ping Chiew, Professor Yee Meng Chiew and Professor C K Soh, visited the department in October. Visit hosted by Professor Xiao-Ling Zhao.
Professor Mikhail Chester of Arizona State University visited the department in November. Visit hosted by Professor Geoff Rose.
Dr Shu-qing Hao of State Key Laboratory for Geomechanics & Deep Underground Engineering, University of Mining & Technology, Xuzhou City, visited the department in November-December. Visit hosted by Professor Jayantha Kodikara.
Professor Yan Xiao, Dean of Civil Engineering College at Hunan University, PR China, visited the department November. Visit hosted by Professor Xiao-Ling Zhao
Professor Zdenek Bazant of Northwestern University USA visited the department in December 2013. Visit was hosted by Dr Wenhui Duan.
Dr Jianguo Dai of Hong Kong Polytechnical University visited the Department in December. Visit hosted by Dr Wenhui Duan.
Professor Kouros Johamadin, of University of Illinois at Chicago, USA, visited the department in December. Visit was hosted by Dr Majid Sarvi.
Professor Serge Hoogendoorn, of Delft University of Technology, Netherlands, visited the department in December. Visit was hosted by Dr Majid Sarvi.

Professor Steve Greaves of ITLS Sydney, visited the department in December. Visit was hosted by Dr Majid Sarvi.

A/Professor Raymond Hoogendoorn of Delft University of Technology, Netherlands, visited the department in December. Visit was hosted by Dr Majid Sarvi.

Professor Michiel Bliemer of ITLS Sydney visited the department in December. Visit was hosted by Dr Majid Sarvi.

Dr Alex Torday, of TSS Spain, visited the department in December. Visit was hosted by Dr Majid Sarvi.

A/Professor Russell Thompson of Melbourne University visited the department in December. Visit hosted by Dr Majid Sarvi.

Professor Eil Kwon, of University of Minnesota Duluth, USA visited the department in December. Visit hosted by Dr Majid Sarvi.

Dr Alex Torday, of University of Minnesota Duluth, USA visited the department in December. Visit hosted by Dr Majid Sarvi.

A/Professor Russell Thompson of Melbourne University visited the department in December. Visit hosted by Dr Majid Sarvi.

Dr Yiming Bie visited the department December 2013 to November 2014. Visit hosted by Dr Zhiyuan Lu.

Occupational Trainees:

Mr Masaru Shimizu of Kyoto University visited the department in January. Visit hosted by Dr Yu Bai.

Mr Antonello Mancuso of Universita della Calabria, Italy, visited the department between January – September. Visit hosted by Professor Ana Deletic.

Ms Stephanie Petit of UCB Lyon, France, visited the department February – March. Visit hosted by Dr David McCarthy.

Mr Mehdi Rahmati, of University of Tabriz, Iran, visited the department March-September. Visit hosted by Professor Jeff Walker and Dr Chris Rüdiger.

Mr Shi Cheng of Tsinghua University, China, visited the Department from May – August. Visit hosted by Dr Yu Bai.

Ms Laura Weiden of University of California, Irvine, USA visited the Department June-August. Visit hosted by Dr David McCarthy.

Mr Michael Richter of University of Osnabrück, German visited the Department July – October. Visit hosted by Dr Majid Sarvi.

Mr Arnaud Despras of DV-Construction in Orléabs studying at Cesfa BTP-EL.CESI, visited the Department between July-September. Visit hosted by A/Prof PG Ranjith.

Mr Alexis Villemim of PSA Peugeot Citroen Hermoncourt, France, visited the Department July-October. Visit hosted by A/Prof PG Ranjith.

Mr Xiao Huang of University of California visited the department October– December. Visit hosted by Professor Ana Deletic.

Ms Le Zhang of Tsinghua University, China, visited the Department October– December. Visit hosted by A/Prof PG Ranjith.

Mr Niels De Vleeschouwer of Ghent University, Belgium, visited the department from Sept-Dec. Visit hosted by Professor Jerry Tien.

Mr Casey Slaughter of Missouri University of Science & Technology, USA, visited the department between September and February 2014. Visit hosted by Dr Edoardo Daly.

Ms Xiaolin Gong of Southeast University China visited for the period October 2013 - October 2014. Visit hosted by Professor Graham Currie.

Ms Chloe Glizio-Jolis of Technip, France, visited the department between July and October. Visit hosted by A/Prof PG Ranjith.

Mr Ming Hong of Hong Kong Polytechnic University visited the department between January 2013 and January 2014. Visit hosted by Dr Ye Lu.

Mr Xiao Huang of University of California visited the department between October and December. Visit hosted by Professor Ana Deletic.

Mr Lian He of Peking University, China visited the department between September 2013 – September 2014. Visit hosted by Professor Jeff Walker.

Mr Luca Locatelli of Technical University of Denmark visited the department March-April. Visit hosted by Professor Ana Deletic.

Miss Yuan Xu of Northeastern University, China, is visiting the department December 2013 – November 2014. Visit hosted by A/Prof PG Ranjith.
3. EDUCATION

3.1 Course Offerings

The Department offers **undergraduate single degrees** in Civil Engineering, Environmental Engineering, Mining Engineering, and Infrastructure - Design, Construction and Management (the latter in teach-out mode); namely the Bachelor of Engineering, Bachelor of Environmental Engineering, Bachelor of Mining Engineering and the Bachelor of Technology (Infrastructure - Design, Construction and Management).

The Civil program is combined with Arts, Law, Commerce and Science to offer **undergraduate double degrees**, namely the Bachelor of Engineering/Bachelor of Arts, the Bachelor of Engineering/Bachelor of Science, the Bachelor of Engineering/Bachelor of Laws, the Bachelor of Engineering/Bachelor of Commerce, the Bachelor of Engineering/Bachelor of Biomedical Science, and Bachelor of Engineering/Bachelor of Architectural Design.

The Department offers two **postgraduate coursework degrees via off-campus learning** (Masters) at Clayton Campus: one in Infrastructure Engineering and Management, and the other in Transport and Traffic.

3.2 Undergraduate scholarships and prizes

**Scholarships (Faculty)**

Golder Associates Scholarship

Winner: Dilshan De Silva

Keith Rix Scholarship (funded by Leighton Contractors)

Winner: Emily Harris

Traffix Group Scholarship:
Level 2 (partly funded by Mirabito family)

Winner: Alexis Souchon

Traffix Group Scholarship:
Level 3

Winner: Thomas Harrison
Prizes (Faculty)

Civil Contractors Federation presents
The Ian Jacka Award

Winner: Dusha Dayananda

GHD Civil Engineering Award Prize
(top Level 4 graduate)

Winner: Samuel Teong Jyn Chuah

Golder Associates Prize

Winner: Andrew Koay

The Geofabrics Pty Ltd Prize

Winners: Jimmy Luu & Hasan Hamzic

Prizes (Departmental)

Level 1 Prizes

Top Level 1 student entering Civil Engineering (for the student who enters Level 2 of the Civil Engineering degree at the end of the year, with the highest average across all units taken in Level 1 of the Bachelor of Engineering degree)

Winner: Hugh Wallace

Top Level 1 double degree student entering Civil Engineering (for the student who enters Level 2 of the Civil Engineering degree with the highest average across all units in the previous two semesters in any double degree in engineering)

Winner: Tony Liang (no photo available)


**Level 2 Prizes**

Railand Prize for Water Engineering (for best overall performance in the level 2 water engineering unit CIV2263)


Winner: Andrew Cox

Coffey Geotechnics Prize for Geo Engineering (for best overall performance in the level 2 geomechanics unit CIV2242)


Winners: Khuzair Rehan & Dulan Dantanarayana

SRSA Prize for Concrete Structures (For best overall performance in the Level 2 structures unit CIV2226)


Winner: Khuzair Reham

**Level 3 Prizes**

Australian Steel Institute Prize (for best overall performance in the Level 3 steel structures unit CIV3221)


Winner: Xue Le

Douglas Partners Prize for Geomechanics (for best overall performance in Level 3 geomechanics units CIV3247 & CIV3248)


Winner: Anton Shilo
Level 3 Prizes cont.

Engineers Australia Structural Division prize (for best overall performance in Level 3 bridge design and assessment unit CIV3222)

GHD Highway Design Prize (for the group who submitted the best highway design project in Level 3 CIV3283)

Railand Prize for Water Engineering (for best overall performance in the Level 3 water engineering unit CIV3264)

Level 4 Prizes

Civil Engineering Vacation Work Prize (for the best vacation work report)

Foundation Industry Prize for Soil Engineering (for best foundation design in Level 4 Soil Engineering unit CIV4249)
Level 4 Prizes cont.

Foundation Specialists Prize (for the best final year Level 4 geomechanics project)

GHD Prize in Water Engineering (for the greatest proficiency in both Level 4 water engineering units CIV4261 & CIV4268)

Richardson Prize in Transport (for the greatest proficiency in Level 4 transport electives and final year transport project)

Thiess Prize for Civil Engineering (for the group who submitted the best design in Level 4 Civil Engineering Practice CIV4212)

Traffix Group Prize (for the best overall performance in all transport units from Levels 2-4)

Thiess Women in Engineering Awards (for the top female students)

Top First Class Honours Graduate (for the student who graduated with the highest ranking honours result of the year)
3.3 Undergraduate students who graduated in 2013

Bachelor of Engineering (Civil)
Paul Alipasipoulos
Yin Kwan Chow
Andrew Garfield
Jizhou Jiang
Subanu Maheswaran
Huat Sing Lee
Kent Lo
George Simonetto
Petros Thermos
Donn Ng Hsien Wang
Julian Chung Yang Wong
Je Wei Yong

Bachelor of Engineering (Civil) with Honours
Daniel Abicair
Kanishka Atapattu
Hidaet Barucija
Christopher Blair
Jacky Hing Yue Chan
Alissa Colafella
Minh Duc Do
Dale Donohue
Samuel Farag
Wilson Foo
Daniel Forge
Linfei Gao
Rebecca Gibbs
Elazar Goodhardt
Vinayak Gopakumar
Jianxun Guan
Thomas Hardie-Cogdon
Emilly Harris
Mitchell Hawthorn
Thomas Hogan
Jesse Hu
Langduan Huang
Yuancheng Huang
Gregory James
Benjamin Johnson
Eric Jones
Andrei Khaidurov
Andrew Kozik
Sharangar Kuganathan
Lynn Sandi Kyaw
Justin Chung-Yiu Lee
Su-Yi Liu
Matthew Lyster
Hamish Mackinnon
Thomas Maginness
Jack Maher
John Mathios
Michael Millier
Juan Montoya
Natasha Mutch
Gracio Permata
Mithun Ranjanan

Bachelor of Engineering (Civil) with Honours
Elliott Reid
Mani Risal
Brendan Rodgers
Carla Rossimel
Jack Spiers
Nicholas Stetter
Julian Stone
Huynh Thanh Tam
Chiak Kai Tang
Matthew Toomer-Smith
Samuel Vergheese
Maurice Yu Hung Wan
Marvin Wojcik-Mirski
Chun Yu Wong
Tsz Fung Wong
Wen Shen Wong
Qianhui Zhang
Zhujing Zhang

Bachelor of Arts and Bachelor of Engineering (Hons) in the field of Civil Engineering
Madeleine Bedelis
Claire Murphy

Bachelor of Commerce and Bachelor of Engineering (Hons) in the field of Civil Engineering
Matthew Barrie
Laura Cantwell
Terry Wei-Sheng Chen
Li Chuan Chik
Ka Chun Choi
James Collier
William Davis
Andrew Dick
Martin Downman
Anthony England
Tran Quoc Giang
Jonathan Giokas
Ari Hammerschlag
Nicola Howlett
Andrew Iesa
Zachary Leigh
Anthony Cheuk Leung
Andrew Li
Jonathan Ting Zheng Lim
Thomas Mexias
Matthew Morrison
Harrison Pout
Craig Rodrigues
Anthony Rosamilia
Kristopher Saw
Anton Shilo
Hench Wang
Xichen Wang
Bachelor of Laws and Bachelor of Engineering (Hons) in the field of Civil Engineering
Simon Roberts
Linda Xie

Bachelor of Science and Bachelor of Engineering (Hons) in the field of Civil Engineering
Sarah Elhassan
Samuel Hughes
Eamon Lai
Alisa Redsell

Bachelor of Science and Bachelor of Engineering in the field of Civil Engineering
Felix Yuehan Chuang
Chris Rekalis

Bachelor of Civil and Environmental Engineering (Hons)
Samantha Dungey
Johnson Li

Bachelor of Environmental Engineering
Hilda Tsz Man Tsang

Bachelor of Environmental Engineering (Hons)
George Boyer
Callum Browning
Kan Bu
Emily Darlison
Harriet Houghton
Zhenmin Huang
Moya Lenaghan
Xin Li
Yi Mang Mi
Petar Pantic
Riley Shefford
Minmeng Tang
Xin Tian

Bachelor of Environmental Engineering and Bachelor of Science (Hons)
Timothy Werner

3.4 2+2 Program

In 2013, we received 21 2+2 students in total, including 16 students in Civil from Central South University (CSU) in Changsha (China) and five students in Environment from Tongji University in Shanghai (China).
4. RESEARCH

4.1 Research projects undertaken in 2013

Geotechnical Engineering

<table>
<thead>
<tr>
<th>Projects</th>
<th>Investigators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced computational methods for large deformation and failure modelling</td>
<td>Bui</td>
</tr>
<tr>
<td>Modelling of fracture and damage in geomaterials</td>
<td>Bui</td>
</tr>
<tr>
<td>Thermodynamics-based constitutive modelling of geomaterials</td>
<td>Bui</td>
</tr>
<tr>
<td>Micromechanics-based constitutive modelling of geomaterials</td>
<td>Bui</td>
</tr>
<tr>
<td>Modelling of heat and moisture migration in lining systems</td>
<td>Bui</td>
</tr>
<tr>
<td>Effect of grain crushing on constitutive response of geomaterials</td>
<td>Bui</td>
</tr>
<tr>
<td>Numerical modelling of multi-phase flow through porous media</td>
<td>Bui</td>
</tr>
<tr>
<td>Slope failure, landslide and debris flows</td>
<td>Bui</td>
</tr>
<tr>
<td>Soil structure interaction modelling</td>
<td>Bui</td>
</tr>
<tr>
<td>Modelling of erosion and failure in riverbank and river embankment</td>
<td>Bui</td>
</tr>
<tr>
<td>Unsaturated flow behaviour of geotextiles</td>
<td>Bouazza</td>
</tr>
<tr>
<td>Piled embankments</td>
<td>Bouazza</td>
</tr>
<tr>
<td>Heat migration in geomaterials</td>
<td>Bouazza</td>
</tr>
<tr>
<td>Behaviour of geosynthetics in harsh environments</td>
<td>Bouazza</td>
</tr>
<tr>
<td>Moisture dynamics in GCLs</td>
<td>Bouazza</td>
</tr>
<tr>
<td>Interaction of saline leachates with bentonites</td>
<td>Bouazza, Gates</td>
</tr>
<tr>
<td>Unsaturated behaviour of GCLs</td>
<td>Bouazza</td>
</tr>
<tr>
<td>Thermo-hydro-mechanical behaviour of GCLs and other geomaterials</td>
<td>Bouazza</td>
</tr>
<tr>
<td>Interaction of alkaline brines with bentonites</td>
<td>Bouazza, Gates</td>
</tr>
<tr>
<td>Storage of CSG waters</td>
<td>Bouazza</td>
</tr>
<tr>
<td>Improving bentonite formulations with green-chemistry synthesized materials</td>
<td>Gates, Bouazza</td>
</tr>
<tr>
<td>Strength and compressibility behaviour of lime-slag treated acid sulphate soils</td>
<td>Haque, Ranjith PG, Bouazza</td>
</tr>
<tr>
<td>Time dependent mineralogical developments in lime-slag treated acid sulphate soils</td>
<td>Asadul, Ranjith PG, Sasha Wilson</td>
</tr>
<tr>
<td>p-y behaviour of laterally loaded piles socketed into Melbourne mudstone</td>
<td>Haque, Ranjith PG</td>
</tr>
<tr>
<td>Strength and compressibility behaviour of lime-slag treated biochar-soil blends</td>
<td>Haque</td>
</tr>
<tr>
<td>Pile-rock interface shear behaviour under CNS boundary condition</td>
<td>Haque, Kodikara</td>
</tr>
<tr>
<td>Filtration behaviour of granular materials under cyclic loading</td>
<td>Haque, Bouazza</td>
</tr>
<tr>
<td>Critical pipes project (advanced condition assessment and pipe failure prediction project)</td>
<td>Kodikara, Ranjith PG, RD/ Zhao, Haque</td>
</tr>
<tr>
<td>Biochar sequestration in lime-ggbs treated soils</td>
<td>Haque</td>
</tr>
<tr>
<td>Modelling of desiccation cracking of clay</td>
<td>Kodikara</td>
</tr>
</tbody>
</table>
RESEARCH

Modelling of constitutive behaviour of compacted clay
Modelling of fracture in geomaterials
Axial response of seabed pipelines
Use of optical fibres for pipe monitoring
Climate change effects on geo infrastructure
Research into geosequestration of carbon dioxide (CO2), including
temperamical behaviour due to the stored supercritical CO2, formation and
welling behaviour of rock media, migration of CO2 due to change in insitu
stresses
Coupled hydro-mechanical behaviour of fractured and porous rocks
Gas outbursts and groundwater inundation in mines
New extraction methodologies for Shale gas
Underground longwall mining
Enhanced coal bed methane recovery, ECBM
Stability of wellbore analysis
Two-phase and multiphase flow in fractured rock media
Rock physics under high pressure conditions
Characterization of weathered rocks
Tunelling in soft and hard ground
Deep geothermal in Latrobe valley region
Slope stability of large deep open cut mines

Kodikara, Ranjith PG
Kodikara, Bui
Kodikara, Ranjith PG,
Kodikara, Chiu, Ranjith PG
Kodikara
Ranjith PG
Ranjith PG
Ranjith PG
Ranjith PG
Ranjith PG
Ranjith PG
Ranjith PG
Ranjith PG
Ranjith PG

Structural Engineering

<table>
<thead>
<tr>
<th>Projects</th>
<th>Investigators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of shape memory alloy in CFRP matrix for structural repair</td>
<td>Al-Mahaidi, Wong</td>
</tr>
<tr>
<td>Development of epoxy/nanomaterials as adhesives for bonding CFRP to steel plates</td>
<td>Al-Mahaidi, X-L Zhao</td>
</tr>
<tr>
<td>Bond characteristics of CFRP strengthened steel members under extreme temperature cycles</td>
<td>Al-Mahaidi, X-L Zhao</td>
</tr>
<tr>
<td>The study of bond behaviour of CFRP reinforced steel plates under high-amplitude cyclic loading</td>
<td>Al-Mahaidi, X-L Zhao</td>
</tr>
<tr>
<td>Bond characteristics between steel members and carbon fibre reinforced polymer “CFRP” composites</td>
<td>Al-Mahaidi, X-L Zhao</td>
</tr>
<tr>
<td>Durability of structural adhesives and adhesively-bonded structures</td>
<td>Bai</td>
</tr>
<tr>
<td>Composite action in strengthening of laminated glass fin</td>
<td>Bai</td>
</tr>
<tr>
<td>Modular GFRP sandwich assembly for floor or façade application</td>
<td>Bai</td>
</tr>
<tr>
<td>Connections for FRP composite structures</td>
<td>Bai</td>
</tr>
<tr>
<td>Free forming space structures assembled by FRP composites</td>
<td>Bai</td>
</tr>
<tr>
<td>Interaction of carbon nanotubes and cement particles</td>
<td>Collins, Duan</td>
</tr>
<tr>
<td>Investigation of cementitious gel and chloride interaction (durability)</td>
<td>Collins</td>
</tr>
<tr>
<td>Corrosion prediction modelling of reinforced concrete port structures</td>
<td>Collins</td>
</tr>
<tr>
<td>Pore characteristics at the reinforcing bar/concrete interface</td>
<td>Collins</td>
</tr>
</tbody>
</table>

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**RESEARCH**

| Sustaining ageing infrastructure (predictive modelling of ageing: “when to intervene?” and “how?” while maintaining structural performance) | Collins |
| Sustainable reinforced concrete (RC) demountable structures: understanding durability arising from multiple service lives | Collins, Heidarpour |
| Waste utilisation as alternative construction materials | Collins |
| Sustainable cements | Collins |
| Innovative fabricated section subjected to extreme action | Heidarpour, X-L Zhao |
| Composite tubular structures subject to blast and impact | Heidarpour, X-L Zhao |
| Behaviour of steel and composite beam-to-column connections subjected to post-earthquake fire | Heidarpour |
| Behaviour of functionally graded material beams at elevated temperatures | Heidarpour |
| Use of shape memory alloy in steel/concrete composite structures in fire for post-earthquake assessment | Heidarpour, Wong |
| Defect identification in reinforced concrete structures based on ultrasonic guided waves | Lu |
| Use of shape memory alloys in concrete structures | Wong |
| Temperature prediction and heat transfer of dual tubes | Wong |
| Enhanced fire resistance of structures using shape memory alloys | Wong, Bai |
| Modelling behaviour of shape memory alloy in concrete structures | Wong, Heidarpour |
| Use of smart materials for structures in fire | Wong, Al-Mahaidi, X-L Zhao |

**Transportation Engineering**

| Projects | Investigators |
|——— | ——— |
| Impacts of weather on cyclist travel behaviour | Ahmed, Rose, Jacob, Figliozzi |
| Next generation infrastructures foundation Netherlands (Monash University in association with Delft University of Technology, APPM Management Consultants and Coolhaven Urban Engineering), The potential and barriers for new public transport” | Currie |
| Department of Transport Victoria: Before and after assessment of the impact of removing setback filter turns on safety and operations performance on Lonsdale Street bus lanes | Currie, Delbosc |
| NZTA Research programme (customer requirements of multi-modal transportation systems – peer review) | Currie |
| Rail disruption management R&D Project, Metro trains Melbourne | Currie, Delbosc, Pender |
| Exploring the influence of transport on young people’s autonomy and well-being | Delbosc, Vella-Brodrick |
| Understanding changes in youth mobility | Delbosc, Currie |
| Motorised mobility scooters – understanding a growing transport mode for older Australians | Johnson, Rose |
| Improving cyclist safety: understanding the contributing factors in cyclist fatality crashes | Johnson, Bugeja, Hill |
| Optimal toll-setting for distance-based road pricing | Liu |
| Multi axel loading of infrastructure | Moffatt, Young |
| A systemic model to underpin enhanced management of powered-two- | Rose, McClure, Johnson, |
## RESEARCH

<table>
<thead>
<tr>
<th>Projects</th>
<th>Investigators</th>
</tr>
</thead>
<tbody>
<tr>
<td>wheelers as part of a safe, sustainable transport system</td>
<td>Delbosc</td>
</tr>
<tr>
<td>Insight from early adopters of e-bikes</td>
<td>Rose, Dill</td>
</tr>
<tr>
<td>Motorised mobility scooters</td>
<td>Rose and Johnson</td>
</tr>
<tr>
<td>ARC Discovery Project DP120102392 Innovative urban traffic congestion solutions: optimising roadspace using networks of multi-class priority</td>
<td>Sarvi, Currie, Wallace</td>
</tr>
<tr>
<td>Investigating the impact of different turning angles on the collective egress of pedestrian crowds under panic conditions</td>
<td>Sarvi</td>
</tr>
<tr>
<td>A model of a transport research organisation</td>
<td>Shackleton, Young</td>
</tr>
<tr>
<td>Modelling the safety of intersections</td>
<td>Sobhani, Archer, Young, Sarvi</td>
</tr>
<tr>
<td>Innovative tools to improve station design and management of crowds in emergency and panic conditions</td>
<td>Sarvi, currie, Shiakoti, Bandini, Wang</td>
</tr>
<tr>
<td>Modelling mass evacuation of pedestrians under catastrophic events</td>
<td>Shiakoti</td>
</tr>
<tr>
<td>Freight network performance indicators</td>
<td>Thompson</td>
</tr>
</tbody>
</table>

### Water / Environmental Engineering

<table>
<thead>
<tr>
<th>Projects</th>
<th>Investigators</th>
</tr>
</thead>
<tbody>
<tr>
<td>The design of the public realm to enhance urban ecosystem services</td>
<td>Breen</td>
</tr>
<tr>
<td>Exploring social innovations in urban water systems with a novel modelling approach</td>
<td>Brown, Deletic, de Haan</td>
</tr>
<tr>
<td>Socio-technical modelling tools to examine urban water management scenarios</td>
<td>Deletic, McCarthy, Brown, Rauch, Schilizz, Urich</td>
</tr>
<tr>
<td>Sustainable technologies</td>
<td>Deletic, Hatt, McCarthy, Daly, Henry, Schang</td>
</tr>
<tr>
<td>Advancing demonstrating capability for stormwater harvesting in Israeli cities</td>
<td>Deletic, Zinger, McCarthy, Brenner, Breen</td>
</tr>
<tr>
<td>Integrated multi-functional urban water systems</td>
<td>Deletic, McCarthy, Hatt, Cook, Hipsey</td>
</tr>
<tr>
<td>Centre for Water Sensitive Cities, Israel</td>
<td>Deletic, Zinger, McCarthy</td>
</tr>
<tr>
<td>Cities as water supply catchments: stream ecology</td>
<td>Hatt, Walsh, Stewardson</td>
</tr>
<tr>
<td>Understanding the role of vegetation in biofiltration systems</td>
<td>Hatt, Deletic et al</td>
</tr>
<tr>
<td>Fit-for-purpose water production</td>
<td>McCarthy, Deletic, Gernjak, Keller</td>
</tr>
<tr>
<td>Turning rain into food – the benefits and performance of vegetable rain gardens</td>
<td>McCarthy, Fletcher et al</td>
</tr>
<tr>
<td>Monitoring Newport Kangaroo Wetland</td>
<td>McCarthy, Kolotelo, Deletic</td>
</tr>
<tr>
<td>Sinks and sources of faecal micro-organisms in the Yarra river Estuary – ARC Linkage</td>
<td>McCarthy, Deletic, Henry, Kolotelo, Schang</td>
</tr>
<tr>
<td>Wealth from waste – CSIRO Collaboration Cluster</td>
<td>Mudd (with Geography and others). Project led by UTS</td>
</tr>
<tr>
<td>Uranium mining – tailings, rehabilitation, water quality aspects</td>
<td>Mudd</td>
</tr>
<tr>
<td>Sustainable mining – analysing key environmental aspects of metal mining and resource extraction (eg: gass)</td>
<td>Mudd, Yellishetty</td>
</tr>
<tr>
<td>SMOS + Hydrology Study</td>
<td>Pauwels, Verhoest</td>
</tr>
</tbody>
</table>
### Research

**Projects**

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Investigators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rainfall and evapotranspiration measurements using the mobile phone network</td>
<td>Lievens, Guingla, van den Berg, De Lannoy, Kerr, Albitar, Merlin, Gascoin, Rivalland, Cesbio, Wood, Pan, Sahoo, Walker</td>
</tr>
<tr>
<td>Social-technical flood resilience in Water Sensitive Cities – quantitative spatio-temporal flood risk modelling in an urban context</td>
<td>Pauwels</td>
</tr>
<tr>
<td>Transitioning to sustainable urban water management in developing countries of the Pacific region</td>
<td>Poustie, Deletic, Brown</td>
</tr>
<tr>
<td>Streamflow forecasting</td>
<td>Walker</td>
</tr>
<tr>
<td>A new generation flood forecasting system using observations from space</td>
<td>Western, Ryu, Walker, Elliott, Leahy, Crow, Wang, Pagano, Renzullo</td>
</tr>
<tr>
<td>Towards operational monitoring of key climate parameters from synthetic aperture radar</td>
<td>Walker, Beringer, Rüdiger, Daly</td>
</tr>
<tr>
<td>Towards global water and energy balance monitoring using GCOM-W1 in the Australian Murray-Darling basin</td>
<td>Walker, Rüdiger, Daly et al</td>
</tr>
<tr>
<td>Calibration and validation of SMAP in Australia</td>
<td>Walker</td>
</tr>
<tr>
<td>Interfacing the SMAP Cal/Val and application plans</td>
<td>Walker et al</td>
</tr>
<tr>
<td>Monitoring of Troups Creek stormwater harvesting</td>
<td>McCarthy, Deletic, Kolotelo, Henry</td>
</tr>
<tr>
<td>Long-term monitoring of sediment and water quality in Wilsmere Billabong and the Yarra River</td>
<td>Lintern, McCarthy, Deletic</td>
</tr>
</tbody>
</table>

### 4.2 Research grants and income

Research Funding for 2013 was as follows:

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Researchers</th>
<th>Planned Project Duration</th>
<th>Total Project Budget</th>
<th>2013 Actual Income</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ARC Discovery Projects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DP1096456. Development of Leakage Resistant Well-Cements for Geo-Sequestration of Carbon Dioxide Application using Alkali Activated Slag and Geopolymer Cements</td>
<td>Sanjayan, Jay G; Pathegama Gamage, Ranjith; Narsilio, Guillermo A</td>
<td>2010-2013</td>
<td>$144,726</td>
<td>$59,932</td>
</tr>
<tr>
<td>DP110104808. Advancement of cohesive crack approach to model shrinkage and load induced cracking in multi-phase soils</td>
<td>Kodikara, Jayantha K</td>
<td>2011-2014</td>
<td>$255,000</td>
<td>$93,110</td>
</tr>
<tr>
<td>Project Title</td>
<td>Researchers</td>
<td>Planned Project Duration</td>
<td>Total Project Budget</td>
<td>2013 Actual Income</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------------------------</td>
<td>----------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>DP110101095. Tensile Enhancement of Cements Utilising Carbon Nanotubes to Create Stronger, Lighter, More Ductile, and Easier-to-Build Structures</td>
<td>Collins, Francis G; Duan, Wenhui; Wang, Chien M</td>
<td>2011-2014</td>
<td>$280,000</td>
<td>$98,587</td>
</tr>
<tr>
<td>DP120101708. Durability of Carbon Fibre Reinforced Polymer (CFRP) Strengthened Steel Structures against Environment-Assisted Degradation</td>
<td>Zhao, Xiao L; Bai, Yu; Singh, Raman RK; Bandyopadhyay, Sr; Rzkalil, Sami H</td>
<td>2012-2015</td>
<td>$289,000</td>
<td>$51,591</td>
</tr>
<tr>
<td>DP120102203. Cementitious Gel: The Missing Link in Understanding the Ageing of Built Infrastructure</td>
<td>Collins, Francis G; Gates, Will P; Aldridge, Laurence P; Fernando, Kapila; Pickard, Daniel S</td>
<td>2012-2016</td>
<td>$320,000</td>
<td>$107,843</td>
</tr>
<tr>
<td>DP120102392. Innovative urban traffic congestion solutions: Optimising Roadspace Using Networks of Multi-Class Priority Lanes</td>
<td>Sarvi, Majid; Currie, Graham; Wallace, Mark</td>
<td>2012-2015</td>
<td>$285,000</td>
<td>$102,451</td>
</tr>
<tr>
<td>DP120103003. Geological sequestration of carbon dioxide in deep saline aquifers: coupled flow-mechanical considerations</td>
<td>Pathegama Gamage, Ranjith; Haque, Asadul; Viete, Daniel R; Arey, David W; Choi, Xavier</td>
<td>2012-2015</td>
<td>$66,000</td>
<td>$74,627</td>
</tr>
<tr>
<td>DP1096454. Unified analysis of steel and composite structures subjected to static, thermal, earthquake and blast loading</td>
<td>Heidarpour Esfarghani, Amin; Ranzi, Gianluca; Bradford, Mark A</td>
<td>2010-2016</td>
<td>$140,056</td>
<td>$77,533</td>
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<tr>
<td>DP130100109. Microplane material models for graphene-oxide-reinforced concretes</td>
<td>Duan, Wenhui; Sanjayan, Jay G; Bazant, Zdenek P; Wang, Chien M</td>
<td>2013-2016</td>
<td>$189,428</td>
<td>$56,989</td>
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<tr>
<td>DP130100181. Composite Tubular Construction Subject to Impact and Blast Loading</td>
<td>Zhao, Xiao L; Heidarpour Esfarghani, Amin; Wu, Chengqing; Packer, Jeffrey A</td>
<td>2013-2016</td>
<td>$360,000</td>
<td>$104,232</td>
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<tr>
<td><strong>Total ARC Discovery Projects</strong></td>
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**ARC Linkage**

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Researchers</th>
<th>Planned Project Duration</th>
<th>Total Project Budget</th>
<th>2013 Actual Income</th>
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<tbody>
<tr>
<td>LP0989415. Improved Landfill Barrier Design for Changing Climates</td>
<td>Bouazza, Abdelmalek; Gates, Will P; Acikel, Asli; Rowe, Ronald K; Shapoori, Vahid</td>
<td>2009-2013</td>
<td>$206,840</td>
<td>$14,358</td>
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<tr>
<td>LP0990153. Understanding the role of vegetation in nitrogen removal by biofiltration</td>
<td>Fletcher, Timothy; Cartwright, Ian; Cook, Perran; Deletic, Ana; Hatt, Belinda E; Read, Jennifer</td>
<td>2009-2013</td>
<td>$267,988</td>
<td>$14,358</td>
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<tr>
<td>LP0776778. Investigate control of in-situ termite and decay protection and control using microwave technologies</td>
<td>Adam, Constantine Y; Ahmed, Berhan M; Brodie, Graham; Jacob, Mohan; Vinden, Peter; Woods, Graham</td>
<td>2008-2009</td>
<td>$40,000</td>
<td>$10,000</td>
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<tr>
<td>LP100100159. Optimising the design and implementation of public transport priority initiatives</td>
<td>Currie, Graham; Sarvi, Majid; Hounsell, Nicholas B; Kinnear, Ray</td>
<td>2010-2016</td>
<td>$434,294</td>
<td>$855</td>
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<tr>
<td>LP100200197. A systemic model to underpin enhanced management of powered-two-wheelers as part of a safe, sustainable transport system</td>
<td>Rose, Geoffrey; McClure, Roderick J; Calvert, Fiona; Cockfield, Samantha; Daly, Peter; Earnshaw, Jill; Pierini, Marco; Rhys, Griffiths</td>
<td>2011-2014</td>
<td>$767,405</td>
<td>$61,588</td>
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<tr>
<td>Project Title</td>
<td>Researchers</td>
<td>Planned Project Duration</td>
<td>Total Project Budget</td>
<td>2013 Actual Income</td>
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<td>---------------</td>
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<td>-------------------</td>
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<tr>
<td>LP120100718. Sources, sinks and processes of faecal contamination in urban estuaries; a case study of the lower Yarra River Estuary</td>
<td>McCarthy, David T; Deletic, Ana; Osborne, Catherine; Grant, Stanley B</td>
<td>2012-2015</td>
<td>$881,900</td>
<td>$166,976</td>
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<td>LP120200361. Innovative tools to improve station design and management of crowds in emergency and panic conditions</td>
<td>Sarvi, Majid; Currie, Graham; Shiwakoti, Nirajan; Bandini, Stefania; Wang, Fred Y</td>
<td>2012-2016</td>
<td>$450,000</td>
<td>$75,490</td>
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<tr>
<td>LP120200613. Turning pile foundations into sources of renewable energy; addressing remaining geotechnical challenges</td>
<td>Bouazza, Abdelmalek; Pathegama Gamage, Ranjith; Haberfield, Chris M; Laloui, Lyesse</td>
<td>2012-2016</td>
<td>$380,000</td>
<td>$102,451</td>
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<td>LP130100884. Development of advanced deterioration model for the design of stabilised pavement bases</td>
<td>Kodikara, Jayantha K; Bui, Ha H; Jitsangiam, Peerapong; Diaz, Luis; Leung, Gordon; McInnes, Doug; Ramanujam, Joithi M</td>
<td>2013-2017</td>
<td>$306,000</td>
<td>$31,154</td>
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**ARC Other**

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<th>Project Title</th>
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<tbody>
<tr>
<td>SR0800001. National Centre for Groundwater Research and Training</td>
<td>Cartwright, Ian; Daly, Edoardo</td>
<td>2009-2013</td>
<td>$1,424,009</td>
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<td>FT0990681. An assessment of carbon dioxide storage capacity of water bearing sedimentary basins</td>
<td>Pathegama Gamage, Ranjith</td>
<td>2010-2014</td>
<td>$686,400</td>
<td>$97,935</td>
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<td><strong>Total ARC DECRA</strong></td>
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**ACSRF03044. Australia-China Group Mission on the issue of Technology relating to Sustainable alternative Energy from the Deep Earth | Pathegama Gamage, Ranjith | 2013-2014 | $39,300 | **$39,300** |
<table>
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<tr>
<th>Project Title</th>
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<tbody>
<tr>
<td><strong>CSIRO Flagship Collaborative Research Program</strong></td>
<td>Zhao, Xiao L; Kodikara, Jayantha K; Albermani, Faris; Baldock, Tom; Cassidy, Mark J; Cheng, Liang; Duncan, Alec; Einav, Itai; Gaudin, Christophe; Hao, Hong; He, Fangpo; Hu, Yuxia; Ivey, Greg; Li, Jimmy; Randolph, Mark F; Sammut, Karl; White, David J; Woods, Andrew; Burn, Stewart; Dunbabin, Matthew; Dyt, Chris; Griffith, Cedric; Jeng, Dong-Sheng; Li, Fangjun; Rivero, Mayela</td>
<td>2007-2009</td>
<td>$300,000</td>
<td>$45,000</td>
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<tr>
<td><strong>Subsea Pipelines Cluster - Structural Integrity</strong></td>
<td>Walker, Jeffrey; Shahrban, Mahshid; Wang, Quan J</td>
<td>2011-2013</td>
<td>$94,500</td>
<td>$31,500</td>
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<tr>
<td><strong>Assessment of suitability of geosynthetic clay liners containing metal</strong></td>
<td>Bouazza, Abdelmalek</td>
<td>2013-2014</td>
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<td><strong>Total Contract Research Commonwealth Government</strong></td>
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<td><strong>Contract Research State Government</strong></td>
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<td>$761,500</td>
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<tr>
<td><strong>Advanced Condition Assessment and Failure Prediction Technologies for</strong></td>
<td>[Kodikara, Jayantha K; Chiu, Wing K; Haque, Asadul; Rajeev, Pathmanathan; Zhao, Xiao L]</td>
<td>2011-2016</td>
<td>$5,804,094</td>
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<td><strong>Grants Research Commonwealth Government (Non-Competitive)</strong></td>
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<td>$14,561</td>
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<td><strong>Satellite based snow property monitoring across Antarctica as an</strong></td>
<td>Rudiger, Christoph</td>
<td>2012</td>
<td>$9,000</td>
<td>$9,000</td>
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<tr>
<td><strong>Priority pollutants in urban water systems: using sustainable urban</strong></td>
<td>McCarthy, David T</td>
<td>2012</td>
<td>$7,300</td>
<td>$5,561</td>
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<td><strong>Total Grants Research Commonwealth Government</strong></td>
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<td><strong>Grants Research State Government</strong></td>
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<td>$140,000</td>
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<tr>
<td><strong>LP100200197. A systemic model to underpin enhanced management of</strong></td>
<td>Rose, Geoffrey; McClure, Roderick J; Calvert, Fiona; Cockfield, Samantha; Daly, Peter; Earnshaw, Jill; Pierini, Maroo; Rhys, Griffiths</td>
<td>2011-2014</td>
<td>$767,405</td>
<td>$140,000</td>
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<tr>
<td><strong>LP120100718. Sources, sinks and processes of faecal contamination in</strong></td>
<td>McCarthy, David T; Deletic, Ana; Osborne, Catherine; Grant, Stanley B</td>
<td>2012-2015</td>
<td>$881,900</td>
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<td><strong>urban estuaries; a case study of the lower Yarra River Estuary</strong></td>
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<td>Project Title</td>
<td>Researchers</td>
<td>Planned Project Duration</td>
<td>Total Project Budget</td>
<td>2013 Actual Income</td>
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<tr>
<td>------------------------------------------------------------------------------</td>
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<tr>
<td>LP120200361. Innovative tools to improve station design and management of crowds in emergency and panic conditions</td>
<td>Sarvi, Majid; Currie, Graham; Shiwakoti, Nirajan; Bandini, Stefania; Wang, Fred Y</td>
<td>2012-2016</td>
<td>$450,000</td>
<td>$80,000</td>
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<tr>
<td>P027697. Monitoring of Sediment and Water quality in Wilsmere Billabong and the Yarra River</td>
<td>McCarthy, David T; Lintern, Anna</td>
<td>2013-2014</td>
<td>$24,500</td>
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**Total Grants Research State Government** $344,500

**Grants Research Australian Industry/Individual/Non-Profit**

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<th>Project Title</th>
<th>Researchers</th>
<th>Planned Project Duration</th>
<th>Total Project Budget</th>
<th>2013 Actual Income</th>
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<tbody>
<tr>
<td>LP0776702. Securing Longevity of Reinforced Concrete Infrastructure Through Enhanced Cathodic Protection Design</td>
<td>Collins, Francis G; Sanjayan, Jay G; Gray, Benjamin; Forsyth, Maria</td>
<td>2007-2012</td>
<td>$157,000</td>
<td>$15,000</td>
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**LP120200613. Turning pile foundations into sources of renewable energy: addressing remaining geotechnical challenges**

<table>
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<tr>
<th>Researchers</th>
<th>Planned Project Duration</th>
<th>Total Project Budget</th>
<th>2013 Actual Income</th>
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<tbody>
<tr>
<td>Bouazza, Abdelmalek; Pathegama Gamage, Ranjith; Haberfield, Chris M; Laloui, Lyesse</td>
<td>2012-2016</td>
<td>$380,000</td>
<td>$33,500</td>
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**Total Grants Research Australian Industry/Individual/Non-Profit** $48,500

**Contract Research Australian Industry/Individual/Non-Profit**

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<tr>
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<th>Researchers</th>
<th>Planned Project Duration</th>
<th>Total Project Budget</th>
<th>2013 Actual Income</th>
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<tbody>
<tr>
<td>Quality Control of Australian Engineered Timber Products</td>
<td>Adam, Constantine Y</td>
<td>2009-2010</td>
<td>$30,000</td>
<td>$15,000</td>
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<tr>
<td>Project: 2008004180</td>
<td>Deletic, Ana; Fletcher, Timothy</td>
<td>2008-2010</td>
<td>$324,591</td>
<td>$20,394</td>
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**Advanced Condition Assessment and Failure Prediction Technologies for Optimal Management of Critical Pipes (“Critical Pipes”)**

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<th>Planned Project Duration</th>
<th>Total Project Budget</th>
<th>2013 Actual Income</th>
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<tbody>
<tr>
<td>Kodikara, Jayantha K; Chiu, Wing K; Haque, Asadul; Rajeev, Pathmanathan; Zhao, Xiao L</td>
<td>2011-2016</td>
<td>$5,804,094</td>
<td>$40,000</td>
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**Enhancing Melbourne Public Transport Markets**

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<th>2013 Actual Income</th>
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<tbody>
<tr>
<td>Currie, Graham; Schmitt, Lorelei A</td>
<td>2011-2014</td>
<td>$98,000</td>
<td>$28,000</td>
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**Demonstrating Capability for Stormwater Harvesting in Israeli Cities**

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<th>Researchers</th>
<th>Planned Project Duration</th>
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<th>2013 Actual Income</th>
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<tbody>
<tr>
<td>Deletic, Ana; McCarthy, David T; Zinger, Yaron</td>
<td>2011-2013</td>
<td>$725,276</td>
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**Project: 2012002451**

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<tbody>
<tr>
<td>McCarthy, David T</td>
<td>2012-2013</td>
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<td>$28,100</td>
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**6004407. Understanding the Psychology of Fare Evasion**

<table>
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<th>Researchers</th>
<th>Planned Project Duration</th>
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<tbody>
<tr>
<td>Currie, Graham</td>
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<td>$97,768</td>
<td>$54,107</td>
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**Assessment of microstructure changes in soils with high sulphate contents subjected to soil mixing processes**

<table>
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<th>2013 Actual Income</th>
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<tr>
<td>Bouazza, Abdelmalek; Gates, Will P</td>
<td>2013</td>
<td>$37,000</td>
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**Impact of Sewer Overflows on Elster Creek**

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<th>Planned Project Duration</th>
<th>Total Project Budget</th>
<th>2013 Actual Income</th>
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<tbody>
<tr>
<td>McCarthy, David T</td>
<td>2013-2014</td>
<td>$41,400</td>
<td>$34,900</td>
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**Improved management and reporting of unplanned rail disruptions**

<table>
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<th>Researchers</th>
<th>Planned Project Duration</th>
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<tr>
<td>Currie, Graham</td>
<td>2013-2014</td>
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**Total Contract Research Australian Industry/Individual/Non-Profit** $369,851

**Grants Research International Industry**

<table>
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<tr>
<th>Project Title</th>
<th>Researchers</th>
<th>Planned Project Duration</th>
<th>Total Project Budget</th>
<th>2013 Actual Income</th>
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<tbody>
<tr>
<td>Towards global water and energy balance monitoring using G-COM-W1 in the Australian Murray Darling Basin</td>
<td>Walker, Jeffrey; Beringer, Jason; Daly, Edoardo; Rudiger, Christoph</td>
<td>2011-2014</td>
<td>$171,089</td>
<td>$58,045</td>
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**Total Grants Research International Industry** $369,851
### RESEARCH

<table>
<thead>
<tr>
<th>Project Title</th>
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<tr>
<td><strong>Contract Research International Industry</strong></td>
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<tr>
<td>Advanced Condition Assessment and Failure Prediction Technologies for Optimal</td>
<td>Kodikara, Jayantha K; Chiu, Wing K; Haque, Asadul</td>
<td>2011-2016</td>
<td>$5,804,094</td>
<td>$250,018</td>
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<tr>
<td>Management of Critical Pipes (&quot;Critical Pipes&quot;)</td>
<td>Rajeev, Pathmanathan; Zhao, Xiao L</td>
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<tr>
<td>4000104504/11/NL/FVO. Soil moisture ocean salinity (SMOS) and hydrology study</td>
<td>Walker, Jeffrey</td>
<td>2011-2014</td>
<td>$31,654</td>
<td>$15,111</td>
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<td>4000104504/11/NL/FVO. Project: 2013002650</td>
<td>Pauwels, Valentijn RN</td>
<td>2012-2014</td>
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<td>$17,460</td>
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<td><strong>$282,589</strong></td>
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<tr>
<td><strong>CRC</strong></td>
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<tr>
<td>Socio-technical modelling tools to examine urban water management scenarios</td>
<td>Deletic, Ana; Brown, Rebekah R; McCarthy, David T</td>
<td>2012-2016</td>
<td>$813,763</td>
<td>$39,500</td>
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<tr>
<td>C1.1. Cities as Water Supply Catchments - Sustainable Technologies</td>
<td>Deletic, Ana; Daly, Edoardo; Hatt, Belinda E; McCarthy, David T</td>
<td>2012-2014</td>
<td>$968,228</td>
<td>$567,579</td>
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<tr>
<td>D1.1. Integration and Demonstration through Urban Design</td>
<td>Deletic, Ana; McCarthy, David T</td>
<td>2012-2014</td>
<td>$500,001</td>
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**Total income 2013** **$4,900,045**

### 4.3 Research activity in Centres (ITS, MW4L)

**ITS (Institute of Transport Studies)**

The research activities of ITS (Monash) continued to grow in 2013 as evidenced by more than 60 tier-one international journal and conference papers being published during the year and the attraction of over $700,000 in research funds.

ITS (Monash) has increased its role in multi-disciplinary and sustainability-related research. It has been involved in research covering areas of multimodal transport network modelling and optimisation, sustainable transport, public transport use, freeway operations and safety, pedestrian and crowd modelling, motorbike travel and bicycle travel. Reflecting the growth in the research activities, ITS (Monash) has continued to attract a large number of students to its research program (22 PhD students were conducting research in 2013).

Further details about the Institute can be found at its website: [http://www.eng.monash.edu.au/civil/research/centres/its/](http://www.eng.monash.edu.au/civil/research/centres/its/)

**Monash Water for Liveability (formerly the Centre for Water Sensitive Cities)**

The Monash Water for Liveability centre was established to transform communities to live harmoniously and resiliently with the natural water environment. Following the CRC for Water Sensitive Cities Commonwealth grant ($30 million cash + $30 million in-kind), the Centre became Monash Water for Liveability. It delivered on Cities as Water Supply Catchments programs, contributed to government reports, welcomed delegates from several nations, facilitated CRC Research / Industry Partner workshops, and presented at conferences e.g. Interurba III in Austria; World Leadership conference in Jerusalem; Novatech France; and 8th international conference in WSUD, QLD. The water group at Civil Engineering presented 5 international keynotes, 3 national keynotes, 11 conferences and published 21 articles (+ a further 8 accepted) in top international journals.
Representation included consultation with the Urban Water Stakeholder Reference Panel (Federal Dept of Sustainability, Environment, Water, Population & Communities) and chairing the Technical Review Committee of Best Practice Environmental Management Guidelines (BPEM) with the EPA, Office of Living Vic and Melbourne Water. Media representation included Prof Deletic’s keynote on Women in Science, Maths and Engineering with parliamentarians, attracting press coverage; and an episode in SCOPE Channel 10 TV.

International engagement included EU PREPARED (DIISR) developing DAnCE4Water model $260k + in-kind; AUSAID in Vanuatu; establishing Israel’s Centre for Water Sensitive Cities with the Jewish National Fund; collaboration with The Flood Resilience Group from the Netherlands; Pennine Water Group, UK; Urban Drainage as Key Infrastructures in Cities and Towns, a Serbian National Project; and two keynotes by invitation at the Swiss Federal Institute of Aquatic Science and Technology (EAWAG) in Switzerland. MW4L director Prof Deletic chaired a delegation to Indonesia toward her new role as Deputy Chair of the Water Forum Committee in the Australian Academy for Sciences and Engineering.

CRC-funded grants in progress during 2013 totalled $6,261 k (value to Civ Eng $4,351 k), while non-CRC grants totalled $3,757 k (value to Civ Eng $3,287) including these ARC: 1 x DP, 1 x DECRA, 3 x ARC (running) & 1 LIEF grant.

Further details can be found at these websites: http://www.waterforliveability.org.au/ or http://www.watersensitivecities.org.au/

4.4 Research seminars

Research seminars by visitors to the Department

<table>
<thead>
<tr>
<th>Presenter</th>
<th>Seminar Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor Hui-Hai Liu</td>
<td>New constitute relationships for elastic deformation of porous and fractured rock: theory, validation and applications</td>
</tr>
<tr>
<td>Professor Ning Lu (Colorado School of Mines)</td>
<td>A drying cake method for measuring suction stress characteristic curve, soil water retention curve and hydraulic conductivity function</td>
</tr>
<tr>
<td>Prof Kerry Rowe (Queen’s University)</td>
<td>Landfills I have known: The good, the bad and the ugly</td>
</tr>
<tr>
<td>Prof Kerry Rowe (Queen’s University)</td>
<td>Recent insights regarding the performance of GCLs in bottom liners and covers</td>
</tr>
<tr>
<td>Mr Luca Locatelli (Technical University of Denmark)</td>
<td>Modelling the impact of Water Sensitive Urban Design (WSUD), on Urban Flooding</td>
</tr>
<tr>
<td>A/Prof Rachel Brennan (Penn State University USA)</td>
<td>An emerging technology for emerging contaminants: Biocatalysis of endocrine disrupting chemicals in wastewater for beneficial reuse</td>
</tr>
<tr>
<td>Dr Craig Hassed (Monash University)</td>
<td>Mindfulness for resilience wellbeing and performance</td>
</tr>
<tr>
<td>Dr D Ram Chandar (National Institute of Technology, Karnataka, India)</td>
<td>Influene of initiation system on blast results: Case studies of Indian Mining &amp; civil Engineering Projects</td>
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<tr>
<td>Prof Harry Vereecken (Bonn University)</td>
<td>Determining soil water content and hydrological fluxes in terrestrial systems: from observation to prediction</td>
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<tr>
<td>Dr Anne F Van Loon (Wageningen University, The Netherlands)</td>
<td>Why meteorological drought indices should not be used in water resources management</td>
</tr>
<tr>
<td>Professor Pauline Nestor (Pro Vice-Chancellor, Research, Monash University)</td>
<td>University’s research aspirations challenges and strategies</td>
</tr>
<tr>
<td>Professor Robin Baterham (University of Melbourne)</td>
<td>Breakthroughs to reduce energy demand in mining and mineral processing</td>
</tr>
<tr>
<td>Professor Zlatko Skrbis (Pro VC Research &amp; Research Training Monash University)</td>
<td>Monash vision for graduate research</td>
</tr>
<tr>
<td>Mr Liam Palmer-Cannon (AECOM)</td>
<td>Regional rail link project</td>
</tr>
<tr>
<td>Mr Stephen Barrett (Golder Associates)</td>
<td>Geotechnical interpretation for tunnel design and construction</td>
</tr>
<tr>
<td>Professor Mikhail Chester (Arizona State University USA)</td>
<td>Environmental life cycle seminar</td>
</tr>
<tr>
<td>Professor H K Lam (Hong Kong Polytechnic University)</td>
<td>Intelligent transport systems (ITS ) in Hong Kong: Recent development and future applications</td>
</tr>
</tbody>
</table>
**RESEARCH**

<table>
<thead>
<tr>
<th>Presenter</th>
<th>Seminar Topic</th>
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<tbody>
<tr>
<td>Professor Zdenek P Bazant, (Northwestern University USA)</td>
<td>Solid comminution due to kinetic energy of high-rate shear: turbulence, analogy, impact, shock and shale fracturing</td>
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<tr>
<td>Professor Ahmed Elgamal (University of California – San Diego)</td>
<td>Large-scale physical and computational simulation of soil-structure systems</td>
</tr>
<tr>
<td>Dr German Flores (Newcrest Mining Limited, Melbourne)</td>
<td>Block caving overview</td>
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<tr>
<td>Professor Murray Rudman (ADR, Engineering Faculty, Monash University)</td>
<td>Faculty strategic research plan</td>
</tr>
<tr>
<td>Professor Dan M Frangopol, (Lehigh University, Bethlehem PA USA)</td>
<td>Integration of reliability, risk, resilience and sustainability in optimum life-cycle management of civil infrastructures</td>
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**Research seminars by staff and postgraduate students**

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<thead>
<tr>
<th>Presenter</th>
<th>Seminar Topic</th>
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<tr>
<td>Professor Graham Currie</td>
<td>Transforming transport in London for the 2012 Olympic Games</td>
</tr>
<tr>
<td>Dr Mohan Yellishetty</td>
<td>“Industrial waste” or a misnomer in a circular economy: True stories (but incomplete) from Gippsland region</td>
</tr>
<tr>
<td>Dr Gavin Mudd</td>
<td>What the Frack? Understanding the growing coal seam gas controversy</td>
</tr>
<tr>
<td>Dr Matteo Camporese</td>
<td>Coupled vs. uncoupled hydrogeophysical inversion via EnKF assimilation of ERT-monitored tracer test data</td>
</tr>
<tr>
<td>Dr Amin Heidarpour</td>
<td>Innovative fabricated sections utilising Very High Strength or stainless steel tubes and flat or corrugated steel plates</td>
</tr>
<tr>
<td>Dr Daniel Viete</td>
<td>The size effect on compressive strength of intact crystalline rock</td>
</tr>
<tr>
<td>Dr Colin Caprani</td>
<td>The other side of the equation: understanding bridge demands</td>
</tr>
<tr>
<td>Perrine Hamel</td>
<td>Testing the feasibility of restoring low-flow hydrology through stormwater source control</td>
</tr>
<tr>
<td>Mohammad Nasvi</td>
<td>Study of geopolymer as well cement for geological sequestration of carbon dioxide</td>
</tr>
<tr>
<td>Navinda De Silva</td>
<td>A study of CO₂ storage capacity estimation in sedimentary rocks</td>
</tr>
<tr>
<td>Dusan Jovanovic</td>
<td>Modelling sources, sinks and processes of faecal contamination in urban estuaries – case study of Yarra River Estuary</td>
</tr>
<tr>
<td>Md Abdur Rouf</td>
<td>Gas transport through geosynthetic clay liner</td>
</tr>
<tr>
<td>Mahshid Shahrban</td>
<td>Improving streamflow forecasting by integrating remotely sensed observations and numerical weather predictions</td>
</tr>
<tr>
<td>Xiao-ling Wu</td>
<td>Towards medium-resolution soil moisture retrieval from active and passive microwave observations</td>
</tr>
<tr>
<td>Anna Lintern</td>
<td>Digging up the Yarra’s dirty past: using sediment cores to recreate historical flood water quality records</td>
</tr>
<tr>
<td>Asgar Ali</td>
<td>Assessing hydrothermal property of unsaturated GCL subjected to hot brine by experimental and numerical study</td>
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<tr>
<td>Mei Sun Yee</td>
<td>Remote sensing error assessment for subsequent use in model confrontation</td>
</tr>
<tr>
<td>Xiao Yang</td>
<td>Develop planar and space frame structures using pultruded GFRP components</td>
</tr>
<tr>
<td>Lu Zhang</td>
<td>Performance of geomembranes in extreme conditions</td>
</tr>
<tr>
<td>Alastair Macleod</td>
<td>The influence of carbon nanotubes on the microstructure and transport behaviour of Portland cement</td>
</tr>
<tr>
<td>Bo Zou</td>
<td>Fabrication and fracture properties of carbon nanotube reinforced ordinary Portland cement composites</td>
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<tr>
<td>Kanjana Siamphukdee</td>
<td>Development of 3-D predictive ageing simulations of reinforced concrete Port structures</td>
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<tr>
<td>Sindu Satasivam</td>
<td>Experimental study on modular GFRP composite sandwich systems for building construction</td>
</tr>
<tr>
<td>Xiaoying Cao</td>
<td>Modelling forced lane change execution in heterogeneous traffic on arterial road</td>
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<tr>
<td>Shujian Chen</td>
<td>Effect of ultrasonication on dispersion and geometry of CNTs in OPC micro beam bending test of OPC</td>
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<tr>
<td>Suranji Rathnayaka</td>
<td>Effect of pressure transients for failure of water distribution mains</td>
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<tr>
<td>Han Fang</td>
<td>Composite structure of steel and shape memory alloy for fire resistance design</td>
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<tr>
<td>Kelvin Goh</td>
<td>Exploring new methodologies and perceptions of the road safety impacts of bus priority</td>
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<td>Lorelei Schmidt</td>
<td>Do first trips matter? Exploring unfamiliar public transport trips</td>
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<td>Brendan Pender</td>
<td>Unplanned urban passenger rail disruption – new methods and perspectives on bus bridging</td>
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<tr>
<td>Brendan Pender</td>
<td>Social media utilisation during unplanned rail disruption – What’s not to like?</td>
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<tr>
<td>Chris De Gruyter</td>
<td>Assessing the quality of travel plans for new housing and commercial developments</td>
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<tr>
<td>Ranmalee Bandara</td>
<td>Development of a “Soil Hydraulic Property” estimator</td>
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<tr>
<td>Charitha Dias</td>
<td>A modelling framework for crowd dynamics at turning phenomena</td>
</tr>
<tr>
<td>Gary Yu</td>
<td>Numerical and experimental studies of heat transfer process in geothermal energy piles</td>
</tr>
<tr>
<td>Ying Gao</td>
<td>Soil moisture retrieval from active and passive microwave remote sensing</td>
</tr>
<tr>
<td>Yang Ao</td>
<td>Zone of shear influence in pipe axial walking: behaviour of Kaolinite clay subject to cyclic shearing at low normal stress</td>
</tr>
<tr>
<td>Asli Acikel</td>
<td>Unsaturated behaviour of geosynthetic clay liners</td>
</tr>
<tr>
<td>Asghar Korayem</td>
<td>Fabrication and characterization of carbon nanotube epoxy composite and its applications in CFRP strengthening systems</td>
</tr>
<tr>
<td>Mohammed Azmi</td>
<td>Application of high resolution data sources via data fusion process in deriving a new drought index</td>
</tr>
<tr>
<td>Michael Von’t Steen</td>
<td>Determination of design stiffness for soft rock and hard soils based on small strain stiffness</td>
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<tr>
<td>Brendan Pender</td>
<td>Improving response to unplanned passenger rail disruption: a new method to locate rail-replacement bus reserves</td>
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<tr>
<td>Zhehan Weng</td>
<td>A comprehensive life cycle impact assessment (LCIA) of rate earth element (REE) mining, processing and consumption</td>
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<tr>
<td>Kefeng Zhang</td>
<td>Micropollutants validation framework for passive stormwater treatment systems</td>
</tr>
<tr>
<td>Peter Bach</td>
<td>UrbanBEATS: A virtual urban water system tool for exploring strategic planning scenarios</td>
</tr>
<tr>
<td>Harsha Fowdar</td>
<td>Enhancing nitrogen removal efficiency of biofiltration systems for treatment of high strength waters</td>
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<tr>
<td>Bonnie Glaister</td>
<td>Optimisation of phosphorus removal in stormwater biofiltration systems</td>
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<tr>
<td>Andras Fehervari</td>
<td>Glycerol carbonate-bentonite complexes for enhanced containment of hypersaline leachates</td>
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<tr>
<td>Michael Poustie</td>
<td>Transitioning to sustainable urban water management in the South West Pacific region</td>
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<td>Wenjun Feng</td>
<td>Urban stormwater treatment art</td>
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### 4.5 Publications

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<th>Publication Broad Type</th>
<th>Publication Points - Govt (Weighted)</th>
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<td>Journal Article</td>
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<tr>
<td>Conference Publication</td>
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<td>Total</td>
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**Journal Articles – Peer-reviewed**


RESEARCH

Bai, Y., Yang, X., 2013, Novel joint for assembly of all-composite space truss structures: conceptual design and preliminary study, Journal of Composites for Construction [P], vol 17, issue 1, American Society of Civil Engineers, Reston VA USA, pp. 130-138.


Bie, Y., Liu, Z., Ma, D., Wang, D., 2013, Calibration of platoon dispersion parameter considering the impact of the number of lanes, Journal of Transportation Engineering [P], vol 139, issue 2, American Society of Civil Engineers, Reston VA USA, pp. 200-207.


Camporese, M., 2013, Optimal design of horizontally framed miter gates, Journal of Waterway, Port, Coastal and Ocean Engineering [P], vol 139, issue 6, American Society of Civil Engineers, Reston VA USA, pp. 543-547.

Caprani, C.C., 2013, Lifetime highway bridge traffic load effect from a combination of traffic states allowing for dynamic amplification, Journal of Bridge Engineering [P], vol 18, issue 9, American Society of Civil Engineers, Reston VA USA, pp. 901-909.


Feng, P., Zhang, Y., Bai, Y., Ye, L., 2013, Combination of bamboo filling and FRP wrapping to strengthen steel members in compression, Journal of Composites for Construction [P], vol 17, issue 3, American Society of Civil Engineers, Reston VA USA, pp. 347-356.


Grundy, P., 2013, Structural design for disaster risk reduction, Australian Journal of Structural Engineering [P], vol 14, issue 2, Engineers Media Pty Ltd., Crows Nest NSW Australia, pp. 135-144.


Hamel, P., Daly, E., Fletcher, T., 2013, Source-control stormwater management for mitigating the impacts of urbanisation on baseflow: a review, Journal of Hydrology [P], vol 485, Elsevier BV, Amsterdam Netherlands, pp. 201-211.


Hou, C., Han, L., Zhao, X.L., 2013, Full-range analysis on square CFST stub columns and beams under loading and chloride corrosion, Thin-Walled Structures [P], vol 68, Pergamon, Oxford UK, pp. 50-64.


Mashiri, F.R., Zhao, X.L., Tong, L.W., 2013, Fatigue tests and design of welded thin-walled RHS-Channel and Channel-Channel cross-beam connections under cyclic bending, Thin-Walled Structures [P], vol 63, Pergamon, Oxford UK, pp. 27-36.


RESEARCH


RESEARCH


Yan, Y., Liu, Z., Meng, Q., Jiang, Y., 2013, Robust optimization model of bus transit network design with stochastic travel time, Journal of Transportation Engineering [P], vol 139, issue 6, American Society of Civil Engineers, Reston VA USA, pp. 625-634.


Conference Papers – Peer-reviewed

Aghabayk Eagely, S.K., Sarvi, M., Forouzideh, N., Young, W., 2013, A local linear model tree approach to develop car-following model considering lead vehicle types, TRB 92nd Annual Meeting Compendium of Papers, 13 to 17 January 2013, Transportation Research Board, Washington DC USA, pp. 1-12.


Duan, W., Chen, S., Hubler, M., 2013, Water sorption hysteresis in cement nano slits, Mechanics and Physics of Creep, Shrinkage, and Durability of Concrete, 22 September 2013 to 25 September 2013, American Society of Civil Engineers, Reston VA USA, pp. 110-117.


Johnson, M., Rose, G., 2013, Electric bikes - cycling in the New World City: an investigation of Australian electric bicycle owners and the decision making process for purchase, Australasian Transport Research Forum 2013 Proceedings, 2 October 2013 to 4 October 2013, Department of Infrastructure and Regional Development, Canberra ACT Australia, pp. 1-10.


RESEARCH


Wong, M.B., Liu, J., 2013, Inherent fire protection design of concrete beams using shape memory alloys, Concrete 2013 Understanding Concrete, 16 October 2013 to 18 October 2013, Concrete Institute of Australia, North Sydney NSW Australia, pp. 1-8.


### 4.6 Postgraduate research projects

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Project Title</th>
<th>Main Supervisor</th>
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<tr>
<td><strong>MengSc (Research)</strong></td>
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<tr>
<td>Yang Ao</td>
<td>Zone of shear influence in pipe axial walking: Behaviour of Kaolinite clay subject to cyclic shearing at low normal stress</td>
<td>Prof Jayantha Kodikara</td>
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<tr>
<td>Rowan Drinkwater</td>
<td>Investigating the environmental impacts of coal seam gas in Australia</td>
<td>Dr Gavin Mudd</td>
</tr>
<tr>
<td>Kenan Feng</td>
<td>Damping and strain rate effect of geopolymer</td>
<td>Dr Wenhui Duan</td>
</tr>
<tr>
<td>Arezou Houshmand</td>
<td>Improving urban stream condition by redirecting sediments</td>
<td>Dr Belinda Hatt</td>
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<tr>
<td>Fatemeh Javidan</td>
<td>Analysis of structures considering the non-structural architectural elements</td>
<td>Dr Amin Heidarpour</td>
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<tr>
<td>Fujia Luo</td>
<td>Jointing pultruded GFRP tubular components into space latticed shell structure</td>
<td>Dr Yu Bai</td>
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<tr>
<td>Parag Moon</td>
<td>Modelling of new generation structural systems</td>
<td>A/Prof Bill Wong</td>
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<tr>
<td>Mengzi Sun</td>
<td>Modelling, design and fabrication of wireless smart sensor networks for structural health monitoring</td>
<td>Dr Wenhui Duan</td>
</tr>
<tr>
<td>Minna Tom</td>
<td>Turning rain into food; the benefits and performance of vegetable rain-gardens</td>
<td>Dr David McCarthy</td>
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<tr>
<td>Ka Lai Yu</td>
<td>Geothermal Piles</td>
<td>Prof Malek Bouazza</td>
</tr>
<tr>
<td>Bo Zou</td>
<td>Fabrication and fracture properties of Carbon Nanotube reinforced ordinary cement composites</td>
<td>Dr Wenhui Duan</td>
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<td><strong>PhD</strong></td>
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<tr>
<td>Arunodi Abeyrathne</td>
<td>Multi-scale studies of the compression of unsaturated geomaterials</td>
<td>Dr Jayantha Kodikara</td>
</tr>
<tr>
<td>Asli Acikel</td>
<td>Improved landfill barrier design for changing climates</td>
<td>Prof Malek Bouazza</td>
</tr>
<tr>
<td>Kayvan Aghabayk</td>
<td>Modelling heavy vehicle car-following in congested traffic conditions</td>
<td>Prof William Young</td>
</tr>
<tr>
<td>Farhana Ahmed</td>
<td>Impact on weather on commuter cycling behaviour and possible effects of climate change</td>
<td>Prof Geoff Rose</td>
</tr>
<tr>
<td>Asgar Ali</td>
<td>Experimental and numerical study of GCL subjected to elevated temperature</td>
<td>Prof Malek Bouazza</td>
</tr>
<tr>
<td>Richard Amoh-Gyimah</td>
<td>Management of urban transport congestion in Ghana</td>
<td>A/Prof Majid Sarvi</td>
</tr>
<tr>
<td>Mohammad Azmi</td>
<td>Application of high risk resolution data sources via data fusion process in deriving a new drought index</td>
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<td>UrbanBEATS: a virtual urban water system tool for exploring strategic planning scenarios</td>
<td>Dr David McCarthy/Prof Ana Deletic</td>
</tr>
<tr>
<td>Saeed Bagloee</td>
<td>A hybridized traffic assignment method based on Ashtiani’s complementary method and origin-based assignment method</td>
<td>A/Prof Majid Sarvi</td>
</tr>
<tr>
<td>Ranmalee Bandara</td>
<td>Development of a soil hydraulic parameter estimator</td>
<td>Prof Jeff Walker</td>
</tr>
<tr>
<td>Daniel Borrie</td>
<td>Durability of carbon fibre reinforced polymers (CFRP) and steel bonds under the influence of fatigue loading and extreme weather environments</td>
<td>Prof Xiao-Ling Zhao</td>
</tr>
<tr>
<td>Jeddah Breman</td>
<td>Dynamic adaption for enabling city evolution for water (DAnCE4Water) model development</td>
<td>Prof Ana Deletic</td>
</tr>
<tr>
<td>Student Name</td>
<td>Project Title</td>
<td>Main Supervisor</td>
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<tr>
<td>Matthew Burns</td>
<td>Flow-regime management: a paradigm for urban stream protection and restoration</td>
<td>Prof Tim Fletcher</td>
</tr>
<tr>
<td>Xiaoying Cao</td>
<td>Modelling forced lane change execution in heterogeneous traffic on arterial road</td>
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<td>Gayani Chandrasena</td>
<td>Faecal microorganism removal in stormwater biofilters</td>
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<td>Geopolymer as well cement for geological sequestration of carbon dioxide</td>
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<td>Shujian Chen</td>
<td>Improving mechanical properties of ordinary Portland cement utilising carbon nanotubes: fabrication, characterization and modelling</td>
<td>Dr Wenhui Duan</td>
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<tr>
<td>Bishwajit Chowdhury</td>
<td>Mechanical behaviour of lime-slag treated Coode Island Silt</td>
<td>Dr Asadul Haque</td>
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<td>Implementation of travel plans at new residential developments: theory practice and prospects</td>
<td>Prof Geoff Rose</td>
</tr>
<tr>
<td>Dilanth De Silva</td>
<td>Geological sequestration of carbon dioxide in deep saline aquifers: coupled flow-mechanical considerations</td>
<td>Prof Ranjith PG</td>
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<td>A study of CO2 storage capacity estimation in sedimentary rocks</td>
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</tr>
<tr>
<td>Arian Dhini</td>
<td>Optimization of public transportation integration plan in Jakarta</td>
<td>Prof Graham Currie</td>
</tr>
<tr>
<td>Charitha Dias</td>
<td>Crowd dynamics in complex environments under normal and panic conditions</td>
<td>A/Prof Majid Sarvi</td>
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<tr>
<td>Han Fang</td>
<td>Composite structure of steel and shape memory alloy for fire resistance design</td>
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</tr>
<tr>
<td>Steven Fang</td>
<td>Fibre reinforced polymer sandwich structures for modular wall assembly</td>
<td>Dr Yu Bai</td>
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<tr>
<td>Wenjun Feng</td>
<td>Fit–for-purpose water production</td>
<td>Prof Ana Deletic/ Dr David McCarthy</td>
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<td>Andras Fehervari</td>
<td>Advanced nanocomposites for enhanced containment of hyper-saline leachates</td>
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<td>Kai Gong</td>
<td>Mechanical and rheological properties of graphene oxide reinforced cementitious composites</td>
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<td>Bonnie Glaister</td>
<td>Optimisation of phosphorus removal in stormwater biofiltration systems</td>
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<td>Milad Haghani</td>
<td>Stochastic approach of transportation networks analysis</td>
<td>A/Prof Majid Sarvi</td>
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<td>Perrine Hamel</td>
<td>Restoring catchment low-flow hydrology by infiltration-based stormwater source-control systems</td>
<td>Prof Tim Fletcher</td>
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<tr>
<td>Alexander Holmes</td>
<td>Using high resolution remote sensed data to infer bush fire location and intensity</td>
<td>Dr Chris Rüdiger</td>
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<td>Student Name</td>
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<tr>
<td>Sajjad Hosseini</td>
<td>Fracture analysis of thin-walled layered composites using extended finite element method (XFEM)</td>
<td>Dr Amin Heidarpour</td>
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<td>Lucheng Huang</td>
<td>Self-reinforced PLA composites</td>
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<td>Jahidul Islam</td>
<td>Geopolymer concrete</td>
<td>A/Prof Frank Collins</td>
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<td>Shahidul Islam</td>
<td>Behaviour of lime-slat treated acid sulphate soils</td>
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<tr>
<td>Shahi Islam</td>
<td>Application of pedestrian crowd modelling to better urban planning and design</td>
<td>Dr Zhiyuan Liu</td>
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<td>Tanvirul Islam</td>
<td>An improved volume change framework for compacted unsaturated soils</td>
<td>Prof Jayantha Kodikara</td>
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<td>Marietta John</td>
<td>Microbial source tracking in the Yarra River Estuary</td>
<td>Dr David McCarthy</td>
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<td>Babak Amani Jordehi</td>
<td>Understanding ownership and commuter use of powered two-wheeled vehicles in Melbourne</td>
<td>Prof Geoff Rose</td>
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<td>Modelling sources, sinks and processes of faecal contamination in urban estuaries</td>
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<td>Daniel King</td>
<td>Load transfer platform behaviour in a geosynthetic reinforced piled embankment</td>
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<tr>
<td>Asghar Korayem</td>
<td>Fabrication and characterization of carbon nanotube reinforced epoxy composites and their applications in CFRP-steel double strap joints as structural adhesives</td>
<td>Dr Wenhui Duan</td>
</tr>
<tr>
<td>Yali Li</td>
<td>Passive filtration for pathogen removal in urban stormwater</td>
<td>Dr David McCarthy/Prof Ana Deletic</td>
</tr>
<tr>
<td>Zunrou Li</td>
<td>Prestressed grouted sleeve connection of FRP tubular members</td>
<td>Dr Yu Bai</td>
</tr>
<tr>
<td>Anna Lintern</td>
<td>Digging up the Yarra’s dirty past: using sediment cores to recreate historical water quality records</td>
<td>Dr David McCarthy</td>
</tr>
<tr>
<td>Wasantha Liyanage</td>
<td>On the coupled hydro-mechanical behaviour of jointed rock masses: an application to mine slope stability</td>
<td>Prof Ranjith PG</td>
</tr>
<tr>
<td>Katherina Lizama</td>
<td>Subsurface flow constructed wetlands for the removal of arsenic and metals from contaminated water</td>
<td>Prof Tim Fletcher</td>
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<tr>
<td>Yang Liu</td>
<td>Compatibility of geosynthetic clay liners with acidic solutions</td>
<td>Prof Malek Bouazza</td>
</tr>
<tr>
<td>Alastair MacLeod</td>
<td>Influence of carbon nanotubes on the microstructure and transport behaviour of Portland cement</td>
<td>A/Prof Frank Collins</td>
</tr>
<tr>
<td>Ze Meng</td>
<td>Modelling of faecal microorganism behaviour in constructed wetlands</td>
<td>Dr David McCarthy</td>
</tr>
<tr>
<td>Mahsa Mirmomeni</td>
<td>Mechanical properties of partially damaged steel, confined and unconfined concrete materials induced by high strain rate loading at elevated temperatures</td>
<td>Dr Amin Heidarpour</td>
</tr>
<tr>
<td>Ahmed Mirza</td>
<td>Safety during the signal change intervals at signalized intersections with platoon arrivals</td>
<td>A/Prof Majid Sarvi</td>
</tr>
<tr>
<td>Michael Moffatt</td>
<td>The influence of multiple axle loads on pavement performance</td>
<td>Prof William Young</td>
</tr>
<tr>
<td>Negin Moghaddam</td>
<td>Subsurface structural properties retrieval in Surat basin using space-borne SAR interferometry deformation maps</td>
<td>Dr Chris Rüdiger</td>
</tr>
<tr>
<td>Kamal Murari (IITB/Monash)</td>
<td>Impacts of climate variability and climate change on water availability for vegetation at a river basin scale</td>
<td>Dr Edoardo Daly/Dr S Ghosh</td>
</tr>
<tr>
<td>Student Name</td>
<td>Project Title</td>
<td>Main Supervisor</td>
</tr>
<tr>
<td>----------------------</td>
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</tr>
<tr>
<td>Senthilkumar Muthukrishnan</td>
<td>Offshore pipe clay seabed interaction in axial direction</td>
<td>Dr Jayantha Kodikara</td>
</tr>
<tr>
<td>Mohammad Nassernia</td>
<td>Behaviour of innovative fabricated stub columns under fire utilising VHS steel tubes</td>
<td>Dr Amin Heidarpour</td>
</tr>
<tr>
<td>Nomeritae Nasir</td>
<td>Hydrological modelling and hydraulic performances of canal blocking systems in tidal peatland area of Central Kalimantan</td>
<td>Dr Edoardo Daly</td>
</tr>
<tr>
<td>Farhana Naznin</td>
<td>Signal priority in bus lane</td>
<td>A/Prof Majid Sarvi</td>
</tr>
<tr>
<td>Mohammad Noor</td>
<td>Development of a model for soil salinity and its interaction with vegetation</td>
<td>Dr Edoardo Daly</td>
</tr>
<tr>
<td>Katerina Pavkova</td>
<td>Network-wide impacts of priority lane allocation through comprehensive modelling</td>
<td>Prof Graham Currie</td>
</tr>
<tr>
<td>Emily Payne</td>
<td>The influence of plant species and water dynamics on nitrogen removal within stormwater biofilters</td>
<td>Dr Belinda Hatt</td>
</tr>
<tr>
<td>Brendan Pender</td>
<td>Unplanned urban passenger rail disruption – new methods and perspectives on bus bridging</td>
<td>Prof Graham Currie</td>
</tr>
<tr>
<td>Michael Poustie</td>
<td>Transitioning to sustainable urban water management in developing urban centres in the Pacific Region</td>
<td>Prof Ana Deletic/Prof R Brown</td>
</tr>
<tr>
<td>Mustafizur Rahaman</td>
<td>Exclusive bus lane with signal prioritization</td>
<td>Prof Graham Currie</td>
</tr>
<tr>
<td>Suranji Rathnayaka</td>
<td>Modelling of pipe-soil interaction in seabed</td>
<td>Prof Jayantha Kodikara</td>
</tr>
<tr>
<td>Ashani Ranathunga</td>
<td>Investigation of long term safe storage of CO2 in coal seams with enhanced methane recovery</td>
<td>Prof Ranjith PG</td>
</tr>
<tr>
<td>Tharaka Rathnaweera</td>
<td>Geological sequestration of carbon dioxide in deep saline aquifers: Coupled flow-mechanical considerations</td>
<td>Prof Ranjith PG</td>
</tr>
<tr>
<td>Md Abdur Rouf</td>
<td>Gas transport through geosynthetic clay liner</td>
<td>Prof Malek Bouazza</td>
</tr>
<tr>
<td>Sindu Satasivam</td>
<td>Fibre-reinforced polymer composite sandwich structures for construction</td>
<td>Dr Yu Bai</td>
</tr>
<tr>
<td>Lorelei Schmitt</td>
<td>Do first trips matter? Exploring unfamiliar public transport trips</td>
<td>Prof Graham Currie</td>
</tr>
<tr>
<td>Mike Shackleton</td>
<td>Considerations in valuing road agency-funded road infrastructure research in Australia</td>
<td>Prof William Young</td>
</tr>
<tr>
<td>Mahshid Shahrban</td>
<td>Improving streamflow forecasting by integrating remotely sensed observations and numerical weather predictions</td>
<td>Prof Jeff Walker</td>
</tr>
<tr>
<td>Benjamin Shannon</td>
<td>Fracture propagation of cohesive soils under tensile loading and desiccation</td>
<td>Prof Jayantha Kodikara</td>
</tr>
<tr>
<td>Shi Shi Shao</td>
<td>Study of coupled thermo-hydro mechanical (THM) behaviour of rocks: Deep geothermal energy</td>
<td>Prof Ranjith PG</td>
</tr>
<tr>
<td>Kanjana Siampukdee</td>
<td>Security longevity of reinforced concrete infrastructure through enhanced cathodic protection design</td>
<td>A/Prof Frank Collins</td>
</tr>
<tr>
<td>Mahbubul Siddiquee</td>
<td>Sources, sinks and processes of faecal contamination in the lower Yarra river Estuary</td>
<td>Dr David McCarthy</td>
</tr>
<tr>
<td>Sina Sinaie</td>
<td>A fundamental study on the basic components of steel-concrete composite structures subjected to post-earthquake fire</td>
<td>Dr Amin Heidarpour</td>
</tr>
<tr>
<td>Student Name</td>
<td>Project Title</td>
<td>Main Supervisor</td>
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<td>------------------------------</td>
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<tr>
<td>Banambar Singh (IITB/Monash)</td>
<td>A numerical study of creation of optimal fracture networks for heat extraction from engineered geothermal reservoirs</td>
<td>Prof Ranjith PG/ Prof D Chandrasekharam</td>
</tr>
<tr>
<td>Kunal Singh (IITB/Monash)</td>
<td>Investigation of permeability of fractured steep and deep rock slopes with high ground water pressures</td>
<td>Prof Ranjith PG/Prof D N Singh</td>
</tr>
<tr>
<td>Nikhil Sirdesai (IITB/Monash)</td>
<td>Numerical and experimental study of rocks under very high temperature conditions: underground coal gasification</td>
<td>Prof Ranjith PG/Prof T N Singh</td>
</tr>
<tr>
<td>Jin-Young Song</td>
<td>Prediction of strong ground motions by advanced numerical modelling of seismic wave propagation</td>
<td>Dr Amin Heidarpour</td>
</tr>
<tr>
<td>Qianyi Song</td>
<td>Behaviour of I-beam to box column connections under post-earthquake fire</td>
<td>Dr Amin Heidarpour/Prof Xiao-Ling Zhao</td>
</tr>
<tr>
<td>Anudeep Sure (IITB/Monash)</td>
<td>Distributed hydrological modelling of Murray Darling Basin through assimilation of remotely sensed datasets</td>
<td>Dr Valentijn Pauwels/Dr R Ramsankaran</td>
</tr>
<tr>
<td>Roger Toleman</td>
<td>Australian toll roads and sustainability: Friends or foes?</td>
<td>Prof Geoff Rose</td>
</tr>
<tr>
<td>Long Truong</td>
<td>Understanding operational effects of combinations of public transport priority measures</td>
<td>A/Prof Majid Sarvi</td>
</tr>
<tr>
<td>Nadeesha Ukwattage</td>
<td>Study of the accelerated carbonation of coal fly ash for carbon dioxide sequestration and soil amendment</td>
<td>Prof Ranjith PG</td>
</tr>
<tr>
<td>Parikshit Verma</td>
<td>Modelling root water uptake: root water compensation and hydraulic redistribution</td>
<td>Dr Edoardo Daly</td>
</tr>
<tr>
<td>Vishal Vikram (IITB/Monash)</td>
<td>An investigation on carbon dioxide sequestration in Indian coal seams</td>
<td>Prof Ranjith PG/Prof T N Singh</td>
</tr>
<tr>
<td>Michael Von’t Steen</td>
<td>Determination of design stiffness for soft rock and hard soil based on small strain stiffness</td>
<td>Prof Malek Bouazza</td>
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<tr>
<td>Zhehan Weng</td>
<td>A life cycle impact assessment of rare earths mining and use</td>
<td>Dr Gavin Mudd</td>
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<tr>
<td>Chao Wu</td>
<td>Bond characteristics and fatigue behaviour of steel structures strengthened with ultra high modules CFRP plates</td>
<td>Prof Xiao-Ling Zhao</td>
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<tr>
<td>Xiaoling Wu</td>
<td>Towards medium-resolution soil moisture retrieval from active and passive microwave observations</td>
<td>Prof Jeff Walker</td>
</tr>
<tr>
<td>Xiao Yang</td>
<td>Develop planar and space frame structures using pultruded GFRP components</td>
<td>Dr Yu Bai</td>
</tr>
<tr>
<td>Yan Yang</td>
<td>The disadvantaged group: research on improving the public transport service rate</td>
<td>Prof Graham Currie</td>
</tr>
<tr>
<td>Mei Sun Yee</td>
<td>Remote sensing error assessment for subsequent use in model confrontation</td>
<td>Prof Jeff Walker</td>
</tr>
<tr>
<td>Kefeng Zhang</td>
<td>Stormwater treatment and control</td>
<td>Prof Ana Deletic</td>
</tr>
<tr>
<td>Lu Zhang</td>
<td>Performance of geomembranes in extreme conditions</td>
<td>Prof Malek Bouazza</td>
</tr>
<tr>
<td>Yanlong Zheng</td>
<td>TBM tunnelling in complex grounds at great depth: rock breaking mechanism and performance prediction</td>
<td>Prof Jian Zhao</td>
</tr>
</tbody>
</table>
## 4.7 Theses accepted for Higher Degree in 2013

<table>
<thead>
<tr>
<th>Candidate Name</th>
<th>Thesis Topic</th>
<th>Supervisor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MEngSc (Research)</strong></td>
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</tr>
<tr>
<td>David Barry-Macaulay</td>
<td>An investigation on the thermal and thermo-mechanical behaviour of soils.</td>
<td>Prof Malek Bouazza, Prof Ranjith Pathegama</td>
</tr>
<tr>
<td>Kai Gong</td>
<td>Mechanical and rheological properties of graphene oxide reinforced cementitious composites</td>
<td>Dr Wenhui Duan, A/Prof Frank Collins, A/Prof Dan Li</td>
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<tr>
<td><strong>PhD</strong></td>
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<tr>
<td>Siti Abdullah</td>
<td>Fibre reinforced polymer rehabilitation of alkali aggregate reaction-damaged concrete structures</td>
<td>Prof Riadh Al-Mahaidi, A/Prof Frank Collins, Dr Ahmad Shayan</td>
</tr>
<tr>
<td>Kayvan Aghabayk</td>
<td>Modelling heavy vehicle car-following in congested traffic conditions</td>
<td>Prof Bill Young, A/Prof Majid Sarvi</td>
</tr>
<tr>
<td>Haider Al-Zubaidy</td>
<td>FRP strengthening of metal structures for impact and blast loads</td>
<td>Prof Riadh Al-Mahaidi, Prof X-L Zhao</td>
</tr>
<tr>
<td>Matthew Burns</td>
<td>Flow-regime management: a paradigm for urban stream protection and restoration</td>
<td>Prof Tim Fletcher, Dr B Hatt, Dr T Ladson</td>
</tr>
<tr>
<td>Bishwajit Chowdhury</td>
<td>Mechanical behaviour of lime-slag treated Coode Island Silt</td>
<td>Dr Asadul Haque, Prof Ranjith, Prof Malek Bouazza</td>
</tr>
<tr>
<td>Navinda De Silva</td>
<td>A study of CO2 storage capacity estimation in sedimentary rocks</td>
<td>Prof Ranjith Pathegama, Dr Asadul Haque</td>
</tr>
<tr>
<td>Cintia Dotto</td>
<td>Parameter sensitivity and uncertainty analysis in simplified conceptual urban drainage models</td>
<td>Prof Ana Deletic, Dr David McCarthy</td>
</tr>
<tr>
<td>Perrine Hamel</td>
<td>Restoring catchment low-flow hydrology by infiltration-based stormwater source-control systems</td>
<td>Prof Tim Fletcher, Prof J Beringer, Dr E Daly</td>
</tr>
<tr>
<td>Yang Liu</td>
<td>Compatibility of geosynthetic clay liners with acidic solutions</td>
<td>Prof Malek Bouazza, Dr Will Gates</td>
</tr>
<tr>
<td>Katherina Lizama</td>
<td>Subsurface flow constructed wetlands for the removal of arsenic and metals from contaminated water</td>
<td>Prof Tim Fletcher, Dr David McCarthy</td>
</tr>
<tr>
<td>Senthilkumar Muthukrishnan</td>
<td>Offshore pipe clay seabed interaction in axial direction</td>
<td>Prof Jayantha Kodikara, Dr Wenhui Duan</td>
</tr>
<tr>
<td>Hussein Sadiq</td>
<td>A novel active fire protection approach for structural steel members using NiTi shape memory alloy</td>
<td>A/Prof Bill Wong, Prof r Al-Mahaidi, Prof X-L Zhao</td>
</tr>
<tr>
<td>Michael Shackleton</td>
<td>Considerations in valuing road agency-funded road infrastructure research in Australia</td>
<td>Prof Bill Young</td>
</tr>
<tr>
<td>Amir Sobhani</td>
<td>Developing a modelling framework to assess safety performance of intersections</td>
<td>Prof Bill Young, A/Prof Majid Sarvi, Dr David Logan, Dr Jeffrey Archer</td>
</tr>
<tr>
<td>Parikshit Verma</td>
<td>Modeling root water uptake: root water compensation and hydraulic redistribution</td>
<td>Dr Edoardo Daly, Prof Ian Cartwright</td>
</tr>
<tr>
<td>Vikram Vishal (IITB)</td>
<td>An investigation on carbon dioxide sequestration in Indian coal seams</td>
<td>Prof Ranjith PG/Prof T N Singh (IITB)</td>
</tr>
<tr>
<td>Sasika Wijesooriya</td>
<td>Modelling of desiccation crack depths in clay soils</td>
<td>Prof Ranjith PG, Dr Rajeev Pathmanathan</td>
</tr>
<tr>
<td>Yaron Zinger</td>
<td>Stormwater biofiltration systems: development, optimization and application</td>
<td>Prof Tim Fletcher, Prof Ana Deletic</td>
</tr>
<tr>
<td><strong>Staff PhD</strong></td>
<td></td>
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</tr>
<tr>
<td>Alexa Delbosc</td>
<td>The impact of transport on subjective well-being</td>
<td>Mentor: Graham Currie</td>
</tr>
</tbody>
</table>
4.8 Postgraduate Student Awards

Daniel Borrie was awarded the Noel Murray Scholarship in 2013.

Sina Sinaie won the departmental 3MT competition, and also won 2nd prize and the People’s Choice Award at the faculty 3MT competition final with his speech “An Engineer’s Nightmare: Earthquake and Fire”. He also won the “Best Departmental Seminar Attendance” award for 2013.

Mandadige Samintha Anne Perera won the 2013 departmental “Best PhD Thesis Award”, the faculty “Kenneth Hunt Medal” and the Vice Chancellor’s “Mollie Holman Medal”.

Vikram Vishal won the “Excellence in PhD Thesis award” from IIT-Bombay and also won the Ministry of Science and Technology and Indian National Science Academy “Faculty Award”, the “Fast-Track Award for Young Scientists” and the “Best Thesis Award” from IITb-Monash Research Academy.

Andras Fehervari received 1st place for student oral presentations at the Clay Minerals Society Annual Meeting held at the University of Illinois USA.

Chris De Gruyter won the “Best Presentation” award at the 2013 Postgraduate Conference.

Brenden Pender won the “Best Departmental Seminar Presentation” award for 2013.

The “Best Publication Award” went to Wasantha Liyanage (Geomechanics) and Kayvan Aghhabayak (Transport)

Kai Gong was awarded the 2013 Vice Chancellor’s Commendation for Master’s Thesis excellence award.

Some of the 2013 Monash graduates who were awarded the degree of Doctor of Philosophy included L-R: Prof. Riadh Al-Mahaidi (supervisor), Prof. Xiao-Ling Zhao (supervisor), Dr Gavin Mudd (supervisor), Dr Chao Wu, Prof. Jeff Walker (Head of Department), Dr Tien Nguyen, Dr Sasika Wijesooriya, Dr Wenhu Duan (supervisor).

Three of the inaugural 2013 IITB-Monash Research Academy graduates are L-R: Dr Vikram Vishal, Dr Alan Finkel (Chancellor of Monash University), Dr Siddharth Gadkari, Prof. Mohan Krishnamoorthy (CEO of IITB-Monash) and Dr Shamsuddin N. Ladha.
4.9 Postgraduate Students who graduated in 2013

Graduate Certificate in Infrastructure Engineering and Management
Jason David Brook

Graduate Diploma in Infrastructure Engineering and Management
Richard Andreas Zanner

Graduate Certificate in Transport & Traffic
Samuel Edward Lovejoy
Mark William Rowland

Graduate Diploma in Transport & Traffic
Giulio Ponte
Mark William Rowland

Master of Engineering Science (Research)
Alice Niculescu

Master of Traffic
Aftab Ahmed Abro
Michael Delpach
Matthew Duffy
Robert John Dunn
Michelle Valda Erwin
Rommel Saavedra Mendoza

Master of Infrastructure Engineering and Management
Errol Glen Adams
Ajith Laxman de Silva
Manoj Suranga Dissanayake Dissanayake
Mudiyanselage
Katherine Anita Fletcher
Noha Gad El Rab
Gan Joo Wah Gerard
James Godbee
Scott Robert Hamilton

Master of Infrastructure Engineering and Management cont.
Mouaz El Amin Khalafalla
Nimal Henegama Liyanage
Bhaveshkumar Rameshchandra Modi
Evan Matthew Nisbet
Ajanthan Sithamparampillai
David Michael Tricarico
Trivedi Bhargavbhai
Hiran Wijeratne
Griffin Zakharov

Master of Transport
Krzysztof Lebski
Shaun Michael Luzan
Helen McLaren-Greiss
Neill Lyle Miller
Simon Benjamin Nathan
Sarath Premachandra
Arouny Anne Sakulku
Cameron Steuart
Kristian Michael Turner
Anna Elizabeth Webster
Nicole Marie West
Marzia Zamir

Doctor of Philosophy
Haider Al-Zubaidy
Bishwajit Chowdhury
Alexa Delbosc (staff candidate)
Cintia Dotto (in absentia)
Perrine Hamel (in absentia)
Tien Cuong Nguyen
Hussein Ageed Sadiq
Amir Sobhani
Parikshit Verma
Sasika Wijesooriya
Chao Wu
Yaron Zinger
5. SERVICE

5.1 Contribution to Professional Organisations

Adam, Con (Dr)
Member, ISO Standard TC 165 Committee
Member, Standard Australia TM004 Committee

Bai, Yu Barry (Dr)
Conference Secretary, 4th Asia-Pacific Conference on FRP in Structures (APFIS 2013), Melbourne, Australia 2013
Member of the International Scientific Committee of the 2nd Conference on Smart Monitoring. Assessment and Rehabilitation of Civil Structures (SMAR 2013). Istanbul, Turkey 2013

Bouazza, Malek (Prof)
Chair Organising Committee 7th International Congress on Environmental Geotechnics, Melbourne, Nov. 2014
Vice-Chair ISSMGE TC 215 Environmental Geotechnics
President ACIGS
Honorary Chair Asian Regional Committee of International Geosynthetics Society
ASTM Committee on Geosynthetics
Australian Standard C20 on Geosynthetics
Vic chapter of Australian Geomechanics Society

Bui, Ha (Dr)
Organising Committee, 3rd Japan/Vietnam Joint Symposium on Geohazard and Environmental Issues

Caprani, Colin (Dr)
Membership and Qualifications Committee, Institution of Structural Engineers
Member, Australian Network of Structural Health Monitoring
MS organiser: “Bridge Loading – Measurement and Modelling”, IABMAS 2014, Shanghai
MS organiser: “Vulnerability Modeling and Risk Assessment of Bridges Subjected to Multiple Threats” IABMAS 2014, Shanghai

Clements, John (Prof)
Fellow, Chartered Institute of Logistics and Transport, Australia
Member, Passenger Transport Group Committee, Chartered Institute of Logistic and Transportation

Collins, Frank (Assoc. Prof)
Victorian Committee Member, Concrete Institute of Australia (Past President)
Project Expert Panel Member of the “Implication of Climate Change Impact on Concrete Infrastructure” for Dep’t of Climate Change
Member, American Concrete Institute (ACI) Committees: 222 Corrosion of Metals in Concrete; 217 Mass Concrete; 365 Service Life Prediction
Member, RILEM International Committee TC-217-PRE Progress of Recycling in the Built Environment
Member, Concrete Institute of Australia Concrete Durability Committee

Currie, Graham (Prof)
Vice chair, US Transportation Research Board – Committee AP075 Light Rail Transit Systems
Chair, US Transportation Research Board – Subcommittee on ‘International LRT Developments’ AP075 (3)
Member, US Transportation Research Board – Committee AP050 Bus Transit Systems
Member, US Transportation Research Board – Committee AP025 Public Transportation Planning and Development
Member, VicRoads Roads Based Public Transport Advisory Council
Daly, Edoardo (Dr)
Member of the Scientific Committee for the 40th Annual Congress of the International Association of Hydrogeologists (IAH), Perth, Australia, 15-20 September, 2013
Session chair, Water-ecosystem interactions at different spatial and temporal scales, AOGS 2013 Annual Meeting, Brisbane, Australia, 24-29 June, 2013

Delbosc, Alexa (Dr)
Member, AITPM
Certified Research Associate, Mineta Transportation Institute

Deletic, Ana (Prof)
International Expert Advisor, Pennine Water Group (Sheffield and Bradford Universities), EPSRC (UK) platform grant centre.
Water Forum Committee, Australian Academy of Technological Sciences & Engineering (ATSE), 2012-2013, continuing (elected Deputy Chair effective 2014); Water Recycling: 3rd Steering Committee meeting (“Drinking Water Through Recycling”), Teleconference, Tues 26th March 2013 & subsequent meetings e.g. Round Table Meeting, ATSE, with Sir Bob Watson FRS, Bowen Crescent, Melbourne, Fri 17th May 2013.
+ ATSE Governance Review Committee, Melbourne, Tues 19th March 2013.
Urban Drainage Systems as Key Infrastructures in Cities & Towns – a Serbian Joint National Project.
Meeting with Deputy Head of Mission, Embassy of Israel, & Dr Alan Finkel, ATSE, Bowen Crescent, 11th October.
Elected Deputy Chair (effective January 2014) of Australian Academy of Technological Sciences & Engineering.
Australia-Indonesia Urban Water Initiative, Indonesian Academy of Science (IAPI) - ATSE, as incoming chair of ATSE’s Water Forum, Jakarta, Indonesia, 19th-20th November 2013.
Luncheon with Mr Naftali Bennett MK, Israel’s Minister of Economy, Minister of Jerusalem & Diaspora Affairs & Minister of Religious Affairs, with V.C., Office of External Relations, Monash University, Friday 6th December 2013.

Duan, WenHui (Dr)
Member of organising committee for Concrete 2015 Melbourne

Heidarpour, Amin (Dr)
5th International Conference on Structural Engineering, Mechanics and Computation (SEMC 2013), Cape Town South Africa, September 2013
Composite Construction VII, Queensland July 2013

Johnson, Marilyn (Dr)
Member, Amy Gillett Foundation Research and Policy Committee
Member, Australian Cycling Conference Reference Group

Kodikara, Jayantha (Prof)
ASTM Committee on rock fracturing for energy applications
Liu, Terry (Dr)
Member, Monash Institute of Graduate Research (MIGR), Monash University, (Feb 2013- Feb 2018)

Lu, Ye (Dr)
Member, Australian Network of Structural Health Monitoring

McCarthy, David (Dr)
Secretary of International Working Group on Data and Models (under JCUDA of IWA/IAHR)

Mudd, Gavin (Dr)
Member, Alligator Rivers Region Technical Committee (ARRTC) Darwin
Member, Mine Closure 2013 Conference Technical Committee (Cornwall, UK, September 2013)
Scientific Advisory Group, International Congress on Environmental Geotechnics (Melbourne, November 2014)

Monerris, Alessandra (Dr)
Session chair, High resolution remote sensing for environmental monitoring, IGARSS 2013, Melbourne, July 21-26, 2013.
Session chair, SMOS new application and basic research results III, IGARSS 2013, Melbourne, July 21-26, 2013.
Co-chair, Group I – Observational data, OzEWEX project.

Pauwels, Valentijn (Dr)
Session chair, Recent advances in land surface data assimilation, IGARSS 2013, Melbourne, July 21-26, 2013.

Rose, Geoff (Prof)
Member, US Transportation Research Board – Committee ABE50 Travel Demand Management
Member, US Transportation Research Board – University Representative
Member, US Transportation Research Board Joint Subcommittee on Emerging Vehicles and Personal Transportation
Fellow, Institute of Engineers, Australia
Australasian Transport Research Forum National Steering Committee
International Travel Survey Methods Conference, Local Organising Committee 2011-2014
World Conference on Transport Research, Scientific Committee

Rüdiger, Christoph (Dr)
Session chair, SMOS New Applications and Basic Research Results, IGARSS 2013, Melbourne, July 21-26, 2013.
Scientific Committee Member, Satellite Soil Moisture Validation and Application Workshop, Rome, July 1-3, 2013.
Invited Member, Writing Team, GEOSS Water Strategy Report – Soil Moisture section, since 2012.
Invited Member, AGU Large Field Campaigns committee.
Co-chair, Data Assimilation Working Group, OzEWEX project.
Member OzEWEX Working groups (Data & DA)

Sarvi, Majid (Dr)
Member, US Transportation Research Board – Committee AHB45 Traffic flow Theory
Member, US Transportation Research Board – Committee ADB30 Transportation network modelling
Member, US Transportation Research Board – Committee AHB45 Emergency and evacuation ANB80T
Member, US Transportation Research Board – Committee AHB45 Vehicle user characteristics AND10
Chair, US Transportation Research Board –Crowd dynamic modelling and simulation subcommittee
ISTTT13, Delft University
20th International symposium on traffic and transport theory (ISTTT20), Netherlands, 2013.
Member of the program committee of the ATIS @ EPIA 2013, Artificial Intelligent in Transportation Systems, Portugal 2013
International Symposium on Agent-Based Modelling and Simulation, European Meeting on Cybernetics and System Researches, Vienna, 2012
21st International Conference on Pattern Recognition, Tsukuba, Japan, 2012
Shiwakoti, Nirajan (Dr)
Member, Institute of Engineers, Australia
Member, US Transportation Research Board - Committee on Transit Capacity and Quality of Service (AP015) (April 2013- April 2016)
Member, Monash Institute of Graduate Research (MIGR), Monash University, (July 2012- July 2017)
Faculty advisor, ITEANZ student Chapter, Monash

Thompson, Russell (Dr)
Member, Freight Committee, European Transport Conference
7th International Conference on City Logistics, 2013
T-LOG 2012, 3rd International Conference on Transportation Logistics

Wang, Yibing (Dr)
Member, IFAC (International Federation of Automatic Control) Technical Committee on Transportation Systems
Member, International Advisory Committee for the European Project NEARCTIS (Network of Excellence for Advanced Road Cooperative Traffic management in the Information Society)

Walker, Jeff (Prof)
GCOM-W Science Team Member
SMOS Calibration Validation Team Member
SMAP Science Definition Team Member
SMAP Science Team Member
GEWEX (Global Energy and Water Cycle Experiment) Hydroclimatology Panel Invited Member
AGU (American Geophysical Union) Experiments Committee Invited Member
Member OzEWEX Working groups x 3
Technical co-chair, IGARSS, Melbourne 2013
Session co-chair, MODSIM, Adelaide 2013

Wong, Man-Bui Bill (Assoc. Prof)
Chair of IEAust Structural Branch Committee, Victoria
Member Board of Engineering, Engineers Australia, Victoria Division
Chair 8th Inter-University Invitational Civil Engineering Competition, Monash University July 2014.
Program Committee Member, Architecture and Civil Engineering Conference, Singapore, 18-19 March 2013

Young, William (Prof)
Fellow, Chartered Institute of Logistics and Transport, UK
Fellow, Institute of Transportation Engineers, Australia and NZ
Fellow, Institute of Engineers, Australia
Member, Committee CE-001 – Australian Standards Association AS/NZS 2890.1-6, Parking facilities
Member, Transport Network Modelling Committee, National Research Council, Transport Research Board, USA, 2013.

Zhao, Xiao-Ling (Prof)
Chairman, IIW Sub-commission XV-E on Tubular Structures
Chairman, IIFC International Institute for FRP in Construction] working group on FRP-strengthened metallic structures
Member, International Scientific Committee, 10th Pacific Structural Steel Conference (PSSC 2013), Singapore, October 2013
Member, International Scientific Committee, Second Conference on Smart Monitoring, Assessment and Rehabilitation of Civil Structures, 9 –11 September 2013, Istanbul, Turkey
Co-Chair, 4th Asia-Pacific Conference on FRP in Structures (APFIS2013), Melbourne, December 2013
5.2 Editorial Services

Adam, Con
Member, Editorial Board, FWPA newsletter, “Design of glulam based on lamination grades and mill shorts”
Commercial video publication sponsored by the Timber Industry, promoting Monash University interest in
timber research, and elaborating on the topic of “Racking Capacity of Walls to Resist Wind Forces

Bai, Yu Barry (Dr)
Member, Editorial Board,

Bouazza, Malek (Prof)
Editorial Board Member, Geosynthetics International
Editorial Board Member, Journal of Lowland Technology
Editorial Board Member, Journal of Geotechnical and Geological Engineering
Editorial Board Member, Geosynthetics
Associate Editor, Journal of Geotechnical and Geoenvironmental Engineering, ASCE
Advisory Board Member, Environmental Geotechnics
Editorial Board Member, Geotextiles and Geomembranes

Bui, Ha (Dr)
Editorial Member, Asian Pacific Journal on Computational Engineering

Currie, Graham (Prof)
Associate Editor, Transportation
Member, Editorial board, Road and Transport Research Journal

Daly, Edoardo (Dr)
Member of the editorial board of Advances in Water Resources
Member of the editorial board of Hydrological Processes

Deletic, Ana (Prof)
Guest Editor of Special Issue on Stormwater, Water Research

Duan, WenHui (Dr)
Member, Editorial Board, IES Journal Part A: Civil & Structural Engineering

Kodikara, Jayantha (Prof)
Associate Editor, Canadian Geotechnical Journal
Associate Editor, Journal Environmental Geotechnics

Liu, Zhiyuan (Terry) (Dr)
Editorial Board, International Journal of Transportation
Editorial board member, International Journal on Civil Engineering & Urban Planning

Pauwels, Valentijn (Dr)
Associate Editor, Water Resources Research
Review Editor, Frontiers in Hydrosphere

Ranjith, PG (Assoc. Prof)
Assistant Editor, Journal of Unconventional oil and gas resources
Editorial borad member of Rock Mechanics and rock engineering
Editorial borad member of Engineering Geology

Rose, Geoff (Prof)
Member, Editorial Advisory Board, ICE Transport Journal, Institution of Civil Engineers (UK)
Member, Editorial Board, IET Intelligent Transportation Systems

Rüdiger, Christoph (Dr)
Editorial Board and Associate Editor (Book), Remote Sensing of the Terrestrial Water Cycle, AGU Press
SERVICE

Sarvi, Majid (Dr)
Member, Editorial board, Transportation research part C
Member, Associate Editorial, Transportmetrica B
Member, Editorial board, Journal of advanced transportation
Member, Editorial board, Journal of Transportation letters
Member, Editorial board, Journal of intelligent transportation systems

Shiwakoti, Nirajan (Dr)
Associate editor, International Journal of Industrial Engineering and Management Science

Thompson, Russell (Dr)
Guest editor, Procedia - Social and Behavioral Sciences (Thompson)
Associate Editor, Asian Transportation Research Society

Wang, Yibing (Dr)
Associate Editor, IEEE Transactions on Intelligent Transportation Systems
Book Review Editor, Transportation Research Part C: Emerging Technologies
Associate Editor, International Journal of Vehicle Information and Communication Systems
Member, Editorial Board, The Open Transportation Journal

Walker, Jeff (Prof)
Guest Editor, Journal of Hydrometeorology

Wong, Bill (A/P)
Engineering Structures, Journal of Constructional Steel Research, APFIS conference

Young, William (Prof)
Member, Editorial Advisory Board, Institution of Civil Engineers (UK)

Zhao, Xiao-Ling (Prof)
Member, Editorial Board, Advanced Steel Construction
Member, Editorial Board, International Journal of Structural Stability and Dynamics
Member, Editorial Board, Thin-Walled Structures

5.3 External Review of PhD Theses and MEngSc (Research)

Collins, Frank (Assoc. Prof)
Examiner, PhD Thesis, Swinburne University of Technology

Caprani, Colin (Dr)

Currie, Graham (Prof)
University of NSW
University of Auckland (2)

Daly, Edoardo (Dr)
Examiner, PhD Thesis, University of Western Australia, Perth

Deletic, Ana (Prof)
Examiner, PhD Thesis, Nanyang Technological University (NTU), Singapore

Haque, Asadul (Dr)
PhD Thesis, UoW

McCarthy, David (Dr)
Examiner, PhD Thesis, Lyon, France
5.4 Services to Expert Bodies, Expert Advice & Media Interviews

Adam, Con
Assessment Advisor, R&D Tax Concession

Bai, Yu Barry (Dr)
Oz Reader, Australian Research Council

Bouazza, Malek (Prof)
Reviewer, 1 ARC Discovery, 2 ARC DECRA
Finnish Academy of Science, review discovery grant
Canadian Research Council (NSERC), review 2 discovery grants

Camporese, Matteo (Dr)
Proposal review for: Agence Nationale de la Recherche (France), MIUR (Ministero dell'Istruzione, dell'Università e della Ricerca, Italy).

Collins, Frank (Assoc. Prof)
Oz Reader, Australian Research Council
Project Expert Panel Member of the “Implication of Climate Change Impact on Concrete Infrastructure” for Dep't of Climate Change

Currie, Graham (Prof)
3rd July 2013 Channel News Asia Singapore TV Interview “Talking Point” TV Show – LTA Singapore Early Bird Free Fare Ticket
8 July 2013, The Atlantic Cities, journal paper profiled in article ‘Do we really need ‘sexy’ mass transit vehicles’?
28 July 2013, Channel News Asia Singapore TV Interview “It Figures” Show – LTA Singapore Early Bird Free Fare Ticket

Delbosc, Alexa (Dr)
8 July 2013, The Atlantic Cities, journal paper profiled in article ‘Do we really need ‘sexy’ mass transit vehicles’?
26 August 2013, The Australian, interviewed for article ‘Driving me crazy: Getting a licence a low priority for Generation Y’
26 August 2013, ABC 936 Hobart, interviewed for ‘Your Afternoon with Penny Terry’
26 August 2013, Channel 10, interviewed for ‘The Project’

Deletic, Ana (Prof)
Article in Jerusalem Post on the Israel conference on Water Sensitive Cities
Article in Jerusalem Post on Monash-JNF project on biofilters
Interview re. Victoria Prize for Science & Innovation (Prof Deletic) with photograph, in The Serbian Weekly Newspaper (printed in Serbian script, Cyrillic), online, Feb 2013.
Interview & demonstration of experiment on Biofiltration for SCOPE program “Biomimicry” (Prof Deletic), Network 10 TV, filmed 27th August 2013, televised broadcast went to air on Thursday 10th October 2013.

Also re.expert advice, refer to Section 5.1. above, for list of technical committees, academies, panels etc. Article “Integrated water management can boost ‘liveability’ in cities” for Focus (181), magazine of the Australian Academy of Technological Sciences and Engineering (ATSE), published December 2013.

Duan, Wenhui (Dr)
Oz Reader, Australian Research Council

Johnson, Marilyn (Dr)
8 Dec 2012, 2UE, George and Paul. Interview about cyclists and motorists on Sydney roads
22 Dec 2012, ABC Radio National, Saturday Extra, Interview with Geraldine Doogue. The rise of the electric bike
16 Jan 2013, ABC Radio South Australia, Interview about cyclists and registration
22 Jan 2013, Three D Radio, South Australia, Interview on cycling safety research in regional areas
22 Jan 2013, Improving cyclist safety in regional areas: a case study. The Conversation
28 February, MX Brisbane, Interviewed for article ‘Danger: cyclists ahead’
25 March, Seeing red: why cyclists ride through red lights. The Conversation
26 March, Why cyclists ride through red lights. Cycling tips, online
26 March, ABC Radio NT, Interview about why cyclists ride through red lights
1 April, ABC Radio SA. Interview about why cyclists ride through red lights
24 April, ABC Radio Newcastle. Interview about why cyclists ride through red lights
3 September, Safer roads project – cyclist safety in regional Victoria, Gippsland FM 104.7. Interview with Greg Jessup
4 September, Australian Film Television and Radio School (radio), interview about electric bikes
18 September, The Project, Channel 10, Interview about cyclists riding through red lights
26 September, Catalyst, ABC TV Science, Bike rage, interview
7 October, ABC Radio, New South Wales, Interview about electric bikes
12 October, Herald Sun, Amelia Harris, Jonno Nash, Two-wheeled missiles are hitting our bicycle paths, quote about cyclist speed limit on Southbank, Melbourne
31 October, ABC Radio, Adelaide, interview about mandatory helmets and cyclist safety

Lu, Chunhui (Dr)
Interview re “Salt-free freshwater plan wins Flinders prize” (Dr Lu), Flinders News, online on 12 Mar, 2013.

Lu, Ye (Dr)
Oz Reader, Australian Research Council

Mudd, Gavin (Dr)
Background briefing, 17 Feb 2013 - Toxic Mine Water
7:30 NSW, 22 Feb 2013 - Hunters Hill radioactive waste remediation project
Bush Telegraph, 27 Feb 2013 - Lake Eyre Basin rivers and mining
101 East, Al Jazeera, 11 Jan 2013 - CSG Feature Story, “Risky Business”
4 Corners, 1 April 2013, CSG Feature Story, “Gas Leak”
ABC TV News, 27 May 2013, Environmental Risks of Mercury in Gippsland

Pauwels, Valentijn (Dr)
Proposal review for NSERC (Canadian Natural Sciences and Engineering Research Council) and Swedish Space Board

Rüdiger, Christoph (Dr)
Proposal reviewer for Romanian Ministry of Education

Sarvi, Majid (Ass. Prof)
Engineering Australia, Transport committee

Zhao, Xiao-Ling (Prof)
Oz Reader, Australian Research Council
5.5 External Seminars, Workshops and Special Presentations

**Bouazza, Malek (Prof)**
Short Course on Geosynthetics, Thai Geosynthetics Chapter Bangkok
Seminar on Geosynthetics in mining applications, Nottingham
Seminar on Coal Seam Gas water ponds, Melbourne

**Camporese, Matteo (Dr)**

**Currie, Graham (Prof)**
‘A Summary of Bus/Tram Priority Research at ITS (Monash) Australia’ Institute for Transport Planning and Systems Swiss Federal Institute of Technology (ETH), Zurich, Switzerland, May 30th 2013
‘Exploring Transport Disadvantage, Social Exclusion and Well Being – Major Project Findings’ Transport Studies Unit, Oxford University, UK, Friday 20th September 2013
‘Comments on the East West Link’ Darebin Transport Community Forum, 10th September 2013 Tuesday, 10 September 2013 6:30 pm for 7:00 - 8:30 pm Northcote Town Hall
‘Understanding the Psychology of Fare Evasion’ 10th October 2013 Translink, Brisbane
Active and Public Transport Mode Shift – Context & Experience’ 10th October 2013 Manningham City Council
‘Melbourne Urban Rail Realities and Prospects’ 29th October 2013 Wyndham Transport Advisory Group
‘Melbourne Public Transport Performance Benchmarking’ Melbourne’s Transport Crisis A Public Forum convened by Transport for Melbourne in collaboration with Maribyrnong City Council and members of the Metropolitan Transport Forum7th November 2013 Footscray Town Hall 72 Paisley St, Footscray
‘Transport performance, projects and prospects’ 30th October 2013 City of Port Phillip Sustainable Communities Action Network Meeting Ormond Hall, Mourbyern Street Melbourne
‘Optimising the Design of Public Transport Priority - Overview of Current Findings’ Australian Institute of Traffic Planning and Management Tuesday 12th November 2013 VicRoads Theatre, 60 Denmark Street, KEW, Victoria
‘Large Event Planning – Olympic Perspectives’ Keynote Speech UITPANZ Special Event Planning Master Class 14th November 2013 The Arts centre, 35 Bundall Road, Surfers Paradise Qld
‘Transport perspectives on ageing, social inclusion and well being’ Ministerial Advisory Committee for Senior Victorians Department of Health Wednesday 20 November 2013 0930 - 1430 Conference Room 12.01, Level 12, 50 Lonsdale St

**Daly, Edoardo (Dr)**
Presentation, Dept. of Primary Industries, Catchment scale impacts of land use in southwest Victoria: Field day, Hamilton, VIC, Australia, May 2013

**Deletic, Ana (Prof)**
“How to create an ecologically healthy urban stream – what does the research tell us?”, Urban Stream Catchment Management, CRC for WSC monthly evening seminar series, Monash University Law Chambers, 555 Lonsdale St, Melbourne, Feb 19th 2013.

AusAID Urban water transitions workshop, Conference Room, Chantilly’s on the Bay, Port Vila, Vanuatu (supervising PhD candidate Michael Poustie), 4th-11th March 2013.


Presenting at a meeting with Minister for Water (State Govt Vic) with Jewish National Fund, Parliament House, Spring St, Melbourne, Thurs 21st March 2013.


Workshop on CRC A4.3, DAnCE4Water, including guests from other faculties & interstate, re. Urban Design Module (UDM), Social Transition Model (STM), Biophysical Module (BPM), Economical Valuation Model (EVM), in Civil Engineering Seminar Room, Monash University, Clayton campus, Tues 7th May 2013.

“The Economics of water sensitive cities and liveability?” seminar, CRC for WSC & Stormwater Vic, Bayview Eden, Melbourne, Tues 7th May 2013.

CRC Research Workshop, Monash Law Chambers, 555 Lonsdale St, Melbourne, 8th-9th May 2013.

Keynote at Local Government Association (South Australia) Roundtable meeting, City of West Torrens Council, 165 Sir Donald Bradman Drive, Hilton SA, Fri 24th May 2013.


Two Keynotes at EAWAG (Swiss Federal Institute of Aquatic Science & Technology), Zurich, Switzerland, as invited speaker: “Green Water Technologies in Water Sensitive Cities”; and “Socio-Technical Modelling of Integrated Urban Water Systems”, Mon 10th - Tues 11th June, 2013.

Keynote on Water Sensitive Cities, Interurba III Workshop, Obergurgl, Austria, 16th-17th June 2013.


Water Sensitive City Modelling Toolkit – Beta Release, Monash University Law Chambers, Fri 5th July 2013.

Mini-Symposium with visiting academics / collaborators from University of California, Irvine, USA and interfaculty colleagues of Monash Water for Liveability, held at Monash Sustainability Institute, Clayton campus, 12th July 2013.


Water Sensitive Road Design Workshop, Melbourne Water, Docklands, Tues 30th July 2013.

Botanic Ridge Brainstorming Workshop (with Melbourne Water), CRC headquarters, Monash University, Clayton campus, Thurs 8th August 2013.


Ecoli Workshop, Best Practice Environmental Management (BPEM), EPA headquarters, Carlton, 19th August 2013.

Gathering Practitioners’ Insights, Office of Living Victoria (OLV), Local Flooding & Drainage Issues workshop, 2 Lonsdale St, Melbourne, 21st August 2013.

International Sustainable Stormwater Workshop, CRC offices / Monash Water for Liveability, 4th September 2013.


Mass Spectrometry Platform, Faculty of Science, Monash University, Clayton, 17th September 2013.


Biomimicry, interview on Scope TV, Network 10, broadcast 10th October 2013.


Presentation for California Stormwater Quality Association (CASQA) hosted by University of Irvine, CA, USA, via Webinar, Friday 15th November 2013.


**Dotto, Cintia (Dr)**


Workshop: Launch of the Water Sensitive City Modelling Toolkit (beta) - Workshop – Cintia presented the overview of the model and guided the CRC Industry Partners participants through each of the modules. Monash Law Chambers, 555 Lonsdale St, Melbourne, Fri 5th July 2013.


**Henry, Rebekah (Dr)**

Microbes at Monash 2013, Melbourne, 6th June 2013.

Metagenomics in Melbourne, Melbourne, 27th November, 2013.

**Johnson, Marilyn (Dr)**

21-22 February, (Invited attendee) NHMRC National Road Safety Research Strategy Workshop. Canberra
21 March, (Invited speaker) Crash seminar, Compulsory Third Party, Adelaide. Cyclist safety presentation
24 April, (Invited speaker) Cycling Issues Forum, Institute of Transportation Engineers. Richmond Town Hall Manifesto for safe bike riding in Australia
26 July, Submission to the Queensland Parliamentary Inquiry into Cycling Issues with Amy Gillett Foundation
16 October, Expert participant in the Queensland Parliament Roundtable discussion, Inquiry into Cycling Issues with Amy Gillett Foundation
25 October, Submission to the Australian Capital Territory Parliamentary Inquiry into Vulnerable Road Users with the Amy Gillett Foundation

Johnson, M., Gaudry, T., Simson, A. and Katz, R. Communicating the cycling safety message – Everyone has the right to ride safely for work and play, 2013 Australasian College of Road Safety Conference, Adelaide, 7-8 November - non-peer reviewed conference paper

**Liu, Zhiyuan (Terry) (Dr)**

Invited presentation to Victorian Department of Transport. Topic: Global Container Shipping Network Design (Feb 2013).

School of Mathematics Wollongong University, Australia. Topic: Optimal Toll Design Problem of Urban Congestion Pricing (Mar 2013)

School of Transportation Southeast University, China. Topic: Toll Design Problem of Urban Congestion Pricing (Mar 2013)

**McCarthy, David (Dr)**


**Monerris-Belda, Alessandra (Dr)**

Presentation, 3rd COSMOz Workshop, Brisbane, 21-23 May 2013

**Mudd, Gavin (Dr)**

Seminar, Metal Resources & Environmental Impacts – Assessing Future Scenarios. Centre for Industrial Ecology, Yale University, USA, 16 August 2013.

**Rose, Geoff (Prof)**
Powered-two-wheel vehicles and sustainable transport. Arizona State University (January 2013)

**Rüdiger, Christoph (Dr)**
Invited presentation, SMOS in Australia From Cal/Val to Applications, SMOS Land Applications workshop, Frascati (Italy), 24-26 February, 2013.
Seminar at the Centre of Excellence for Climate System Sciences, Faculty of Arts, Monash, 29 Nov 2013.

**Sarvi, Majid (Dr)**
ISTTT20, transport demand modelling workshop and master class, July 2013, Netherlands

**Walker, Jeff (Prof)**
Presentation, SMAP Science Definition Team Meeting #10, NASA Jet Propulsion Laboratory, Pasadena, USA March, 2013.
Presentation, GCOM-W Investigators Meeting, Tokyo, Japan January 2013
Presentation, IIT-B, Mumbai, India June 2013.
Presentation, South East University, China, June 2013.
Presentation, GARADA Workshop, UNSW, Sydney, October 2013.
Presentation, SMAP Science Team Meeting #1, NASA Jet Propulsion Laboratory, Pasadena, USA November, 2013.

**Zhao, Xiao-Ling (Prof)**
Presentation, Imperial College London, July 2013
Presentation, EMPA, Zurich, September 2013
Thomas Medal Lecture, AWS, Chicago, November 2013
Short course, WTIA, Melbourne, December 2013

### 5.6 Conference Attendance

**Bouazza, Malek (Prof)**
Keynote lecture on Geomembranes in mining works, 5th Asian Regional Conf. on Geosynthetics, Bangkok, Thailand
18-20 November: 2nd African Geosynthetics Conference (GeoAfrica 2013), Accra, Ghana. Prof. Malek Bouazza will present a keynote lecture on Geosynthetics in Mining Applications.
Malek was invited to participate in an NSF (USA-Europe) workshop on geothermal piles, Lausanne, Switzerland, March 2013
Malek was invited to give a Special lecture on Energy pile thermal tests, International Symposium on Coupled Phenomena in Environmental Geotechnics, 1-3 July, Torino, Italy
Malek was invited to present a General report on Environmental Geotechnics, 18th International Conference on Soil Mechanics and Geotechnical Engineering (18th ICSMGE), 2-6 September Paris, France

**Bui, Ha (Dr)**
Oral presentation at 18th International Conference on Soil Mechanics and Geotechnical Engineering (18th ICSMGE) in Paris

**Camporese, Matteo (Dr)**
EGU General Assembly, Vienna, Austria, 7-12 April, 2013.
MODSIM 2013, Adelaide, December 1-6, 2013.

**Caprani, Colin (Dr)**
Transportation Research Board 92nd Annual Meeting, Washington DC, 13-17 January 2013
International Conference on Structural Safety and Reliability, ICOSSAR ‘13, New York, USA
SERVICE

International IABSE Conference on Assessment, Upgrading and Refurbishment of Infrastructures, Rotterdam, 6-8 May 2013
8th International Cable Supported Bridge operators Conference, Edinburgh, 3-5 June 2013
Australian Network for Structural Health Monitoring Workshop, Melbourne, November 2013
International Forum on Engineering Decision-Making, Port Stewart, Dec 2013

Currie, Graham (Prof)
Transportation Research Board 92nd Annual Meeting, Washington DC, 13-17 January 2013
World Congress of UITP, Geneva Switzerland, May 2013
World Conference on Transport Research Rio de Janeiro, Brazil - 15-18 July 2013
13th International Conference Series on Competition and Ownership in Land Passenger Transport (Thredbo 13), Oxford UK Sept 2013
36th Australasian Transport Research Forum, Brisbane Australia 2013
10th Biennial Conference on Environmental Psychology - Symposium on the Psychology of Sustainable Mobility Magdeburg Germany Sept 22nd-25th 2013

Daly, Edoardo (Dr)
AOGS 2013 Annual Meeting, Brisbane, 24-29 June, 2013
IAH 2013, Perth, 15-20 September, 2013
MODSIM 2013, Adelaide, 1-6 December, 2013

Delbosc, Alexa (Dr)
Transportation Research Board 92nd Annual Meeting, Washington DC, 13-17 January 2013

Deletic, Ana (Prof)
Interurba III Workshop (keynote) Obergurgl, Austria, 16th – 17th June 2013.
World Leadership Conference (keynote), Jerusalem, Israel, 17th – 20th June 2013.

Dotto, Cintia (Dr)
Interurba III Workshop Obergurgl, Austria, 16th – 17th June 2013.
8th International Conference for Water Sensitive Urban Design (WSUD 2013)

Duan, WenHui (Dr)
Conference of the ASCE Engineering Mechanics Institute, August 4 – 7, 2013, Northwestern University, Evanston, IL, USA

Hatt, Belinda (Dr)
8th International Conference for Water Sensitive Urban Design (WSUD 2013)

Heidarpour, Amin (Dr)
5th International Conference on Structural Engineering, Mechanics and Computation, 2-4 Sep. 2013, Cape Town, South Africa

Johnson, Marilyn (Dr)
5th Annual Australian Cycling Conference, Adelaide, South Australia, 21-23 January 2013
2013 Australasian Road Safety Research, Policing and Education Conference, Brisbane, Queensland, 28-30 August 2013

Kodikara, Jayantha (Assoc. Prof)
GeoCongress, March 2013 in San Diego, USA

Liu, Terry (Dr)
17th HKSTS International Conference, Hong Kong, China, 15-17 December 2012
CUBE China User Conference, Beijing, 19-21, June 2013
Australasian Transport Research Forum, Brisbane, October 2013

Lu, Ye (Dr)
6th International Conference on Structural Health Monitoring of Intelligent Infrastructure, Hong Kong, 9-11 December 2013
McCarthy, David (Dr)
LET 2013, Bordeaux
NOVATECH 2013, Lyon
Water research conference 2013, Singapore

Monerris-Belda, Alessandra (Dr)
3rd COSMOz Workshop, Brisbane, 21-23 May 2013

Mudd, Gavin (Dr)
Lake Eyre Basin Under the Spotlight (February 2013, Longreach, QLD) – Keynote presentation on 'Mining and the Environment'
World Mining Congress 2013, August 2013, Montreal, Canada, Keynote talk on copper mining and future energy-carbon scenarios.

Pauwels, Valentijn (Dr)
MODSIM 2013, Adelaide, December 1-6, 2013.

Rose, Geoff (Prof)
Transportation Research Board 92nd Annual Meeting, Washington DC, 13-17 January 2013
Australasian Transport Research Forum, Brisbane, October 2013

Rüdiger, Christoph (Dr)
SMOS Land Applications workshop, Frascati (Italy), 24-26 February, 2013.
ESA Satellite Soil Moisture Validation and Application Workshop, Frascati (Italy), 1-3 July 2013.

Sarvi, Majid (Dr)
Transportation Research Board 92nd Annual Meeting, Washington DC, 13-17 January 2013

Shiwakoti, Nirajan (Dr)
Transportation Research Board 92nd Annual Meeting, Washington DC, 13-17 January 2013

Walker, Jeff (Prof)
GCOM Meeting, Tokyo, Japan 29 Jan-1 Feb
ADC Forum Future Summit, Melbourne 22-23 April 2013.
GEWEX Global hydrology panel meeting, Rio de Janeiro, Brazil, 2-6 September, 2013
4th Asia Oceania Meteorological Satellite Users Conference, 9–11 October 2013, Melbourne Australia
MODSIM 2013, Adelaide, December 1-6, 2013.

Wong, Man Bui (Bill) (Assoc. Prof)
6th ECCOMAS Conference on Smart Structures and Materials, SMART2013, Politecnico di Torino, 24-26 June 2013
Proceedings, the 22nd Australasian Conference on the Mechanics of Structures and Materials, Sydney 11-14, December 2012

Wu, Chao (Dr)
4th Asia Pacific Conference on FRP in Structures (APFIS 2013), Melbourne, December 2013

Zhao, Xiao-Ling (Prof)
Twenty-Third International Ocean (Offshore) and Polar Engineering Conference, June 30–July 5 2013, Anchorage, Alaska, USA
2013 CIDECT Annual Assembly, 25-29 August, Vitoria, Spain
Second Middle East Conference on Smart Monitoring, Assessment and Rehabilitation of Civil Structures (SMAR 2013), 9 –11 September, Istanbul, Turkey
66th IIW Annual Assembly, 13-16 September, Essen, Germany
10th Pacific Structural Steel Conference (PSSC), 9-11 October, Singapore
4th Asia Pacific Conference on FRP in Structures (APFIS 2013), Melbourne, December 2013
5.7 **Administration**

**Departmental**

**Bai, Yu (Dr)**
Level 3 Representative  
Director of International Affairs

**Bouazza, Malek (Prof)**
Final year Representative

**Bui, Ha (Dr)**
Time table officer (Semester 2)  
Open Day Committee

**Collins, Frank (A/Prof)**
BE/BArch coordinator

**Daly, Edoardo (Dr)**
Director of Research and Research Training; Research committee

**Duan, WenHui (Dr)**
Member OHS Committee  
Library representative

**Haque, Asadul (Dr)**
HoS, Geomechnics  
Program Leader, Infrastructure Eng & Management  
Member, Education committee  
Time table officer (Semester 1)

**Heidarpour, Amin (Dr)**
Level 2 Course Advisor  
Level 4 Course Advisor, Deputy  
Deputy Head of Structures Group

**Kodikara, Jayantha (Assoc. Prof)**
Publications Officer

**Lu, Ye (Dr)**
Level 3 Deputy Representative  
Departmental website editor

**McCarthy, David (Dr)**
Member Education Committee

**Mudd, Gavin (Dr)**
Course Director, Bachelor of Environmental Engineering

**Pauwels, Valentijn (Dr)**
Head of Water Group  
Research Theme coordinator

**Rose, Geoff (Prof)**
Director, Postgraduate Program in Transport and Traffic

**Rüdiger, Christoph (Dr)**
Deputy Director of Research Training
SERVICE

Sarvi, Majid (Dr)
Director, Institute of Transport
Head of Transport Group
Member, Department research committee
Open day department representative

Shiwakoti, Nirajan (Dr)
Open day committee

Thompson, Russell (Dr)
Deputy Head of Transport Group

Walker, Jeff (Prof)
Head of Department
Executive Committee, Chair
Management Committee, Chair
Head of Section Committee, Chair
OHS Committee, Chair

Wong, Man Bui (Bill) (Assoc. Prof)
Director of Teaching
Deputy Head of Department
Level 1 Representative
Exam Officer, Engineering Committee Representative
B.Tech (Infrastructure) Director

Zhao, Xiao-Ling (Prof)
Member of Executive Committee

Faculty

Collins, Frank (A/Prof)
Faculty Coordinator on the Board of Faculty of Arts and Design (Monash, Caulfield)
Coordinator with the Faculty of Architecture BE/Arch double-degree students

Currie, Graham (Prof)
Faculty Board

Daly, Edoardo (Dr)
Faculty Board

Haque, Asadul (Dr)
Faculty Board
Master of Engineering Working Group (coursework)

Heidarpour, Amin (Dr)
Faculty Board

Kodikara, Jayantha (Assoc. Prof)
Faculty Board

McCarthy, David (Dr)
1st year review committee member

Mudd, Gavin (Dr)
Academic Progress Committee

Pauwels, Valentijn (Dr)
Academic Progress Committee
Member of Business and Economics Faculty Board

PG, Ranjith (A/Prof)
Faculty Blackboard Administrator
SERVICE

Rüdiger, Christoph (Dr)
Academic Progress Committee
Academic Discipline Committee
Faculty Board

Sarvi, Majid (Dr)
Faculty Board

Walker, Jeff (Prof)
Faculty Executive Committee
Quality Verification Committee
Faculty Board Steering Committee
Faculty Board, Executive
Faculty Probation Committee
OSP Committee
Associate Professor Promotion Committee

Wong, Man Bui (Bill) (Assoc. Prof)
Engineering Education Committee

University

Johnson, Marilyn (Dr)
Monash University Human Research Ethics Committee (MUHREC)

Mudd, Gavin (Dr)
Environmental Sustainability Stakeholder/Reference Committee

Rose, Geoff (Prof)
SMT (Environment) and Transport sub-committee

Rüdiger, Christoph (Dr)
Academic Board

Walker, Jeff (Prof)
Academic Board
Provosts Nominee for Associate Professor Promotion Committee
6. TRAINING & PROFESSIONAL DEVELOPMENT

Hatt, Belinda (Dr)
Future Research Leaders Program

Haque, Asadul (Dr)
AGS (VIC)-PhD research presentations

Henry, Rebekah (Dr)
Research Supervisor Accreditation, Level 1

Johnson, Marilyn (Dr)
Monash Research Supervisor Accreditation Program
2013 Monash Mentoring Scheme for Women
101 Media training for ECRs
Communicating your research with the media, presented by AusSMC
Monash University Future Research Leaders Program

Lu, Chunhui (Dr)
Graduate Certificate of Academic Processes

Lu, Ye (Dr)
Graduate Certificate of Academic Practice (GCAP)

Monerris-Belda, Alessandra (Dr)
Future Research Leadership Programme

Pauwels, Valentijn (Dr)
Future Research Leadership Programme

Rüdiger, Christoph (Dr)
Graduate Certificate of Academic Processes
Future Research Leadership Programme
Level 2 Accreditation

Walker, Jeff (Prof)
Middle Eastern Cultural Awareness
China Cultural Awareness
Leadership in Action