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
1. HIGHLIGHTS IN 2016

Awards and Achievements

Congratulations go to Ms Brenda O’Keefe on receiving a Monash University 30 Year Service Medal which was presented by Principal and Vice-Chancellor Margaret Gardner OAM.

Congratulations to Prof Jayantha Kodikara and The Advanced Condition Assessment and Pipe Failure Prediction Project team on receiving the 2016 Research Innovation Award at both the Australian Water Association NSW and National award events. The team also won the International Water Association's (IWA) Project Innovation Award. Well done team!

Congratulations to Dr Ha Bui, Dr Colin Caprani and Dr Alexa Delbosco on being promoted to Senior Lecturer, effective 1 January 2017. Congratulations also to Ha for the Outstanding Reviewer Award, Computers & Geotechnics, 2016.

Congratulations to Associate Professor Barry Bai on winning the Dean's Award for Postgraduate Supervision.

Congratulations go to Dr Chris DeGruyter on winning the 2016 Institute of Transportation Engineering (ITE) Emerging Professional of the Year Award.

Huge congratulations go to Mr Peter Dunbar who was awarded a 45-years' service plaque at the Departmental Annual Awards Dinner in June. What a great achievement!

Congratulations also to Mr Zoltan Csaki on receiving the 2016 Professional Staff Member Award, presented at the Departmental Annual Awards Dinner.

Congratulations to Associate Professor Wenhui Duan on being promoted to Professor, effective 1 January 2017. Congratulations also to Wenhui on winning the Dean's Award for Excellence in Research.
HIGHLIGHTS

Research Achievements

Congratulations go to Dr Alexa Delbosc who won the 2016 Department Excellence in Research Award, which was presented at the Departmental Annual Awards Dinner in June.

Congratulations to Mr Mustafizur Rahman, Professor Graham Currie and Carlyn Muir (MUARC) who won the 2016 William W Millar Award for the best research paper in the area of public transportation, awarded by the 95th Annual Meeting of the Transportation Research Board in Washington DC, USA.

Congratulations to PhD student Mr Long Truong whose paper titled “Estimating delay reduction associated with bus priority measures using kinematic wave theory” has been selected by the ITS Program Committee as the winner of the Distinguished Scientific Papers - Asia Pacific award at the ITS World Congress 2016.

In 2016, the Department was awarded 6 ARC grants totalling almost $3m.

We had 16 PhD completions in 2016.

Education Achievements

Congratulations to Dr Mohan Yellishetty on winning the Dean’s Award for Teaching Excellence. Mohan also won the 2016 Dep’t Excellence in Teaching Award, presented at our Annual Awards Dinner.

The Transport Systems course offered at Suzhou campus in China was awarded the Best Class Award by Jiangsu province.

The annual “Year 8 ChallENGe” event was held in the July school holidays, designed to encourage junior secondary school students in the field of engineering. Six workshops across 3 days were held in each of the Engineering fields.
HIGHLIGHTS

The Civil Engineering student Yr8challENGe was to design, build and test small-scale bridges, made from spaghetti and glue, to see who has the strongest & lightest design. A video of past events and registration for future events can be found at: http://eng.monash.edu.au/challenge/

Departmental Teaching Fellows for 2016 were acknowledged at the Annual Dinner for their contribution to our teaching program. Professor Julia Lamborn presented awards on the night to Khaled Elagha (top left), Joel Gniel (top right), Tony Ladson (middle left), Keith Midson (middle right), Darren Paul (bottom left) and David Sainsbury (bottom right).

Left to right: Mr Gary Liddle, CEO of PTV, Ms Jacinta Allan, Minister for Public Transport, & Prof Graham Currie
Photo courtesy of Eric Brotchie.

Industry & Community Engagement

Professor Graham Currie is leading a new partnership between Monash University and Public Transport Victoria (PTV), called the Public Transport Research Group (PTRG). The PTRG is jointly funded by PTV and Monash, with contributions from Metro Trains, Yarra Trams, VicRoads and the bus industry. PTRG is offering 18 PhD scholarships as part of the Sustainable and Effective Public Transport Graduate Research Interdisciplinary Program (SEPT-GRIP). This is the world’s largest cluster of PhD students in the field of public transport research, with candidates drawn from a range of disciplines, including Engineering, IT, Art & Design, Accident Research, Science and Health. For more information visit www.ptrg.info
**Professor Jerry Tien** took a group of Mining Masters students on a field trip to Savage River in April 2016, as part of the MNE3050 Underground Mining Systems and MNE3040 Surface Mining Systems units. For many students this was their second visit to the site and far more beneficial as they appreciate more after two years of study.

Professor Jerry Tien and **Dr Mohan Yellishetty** met the Honourable Minister of Mines (Afghanistan) during the International Mines Rescue Competition (IMRC) in Melbourne to discuss executive training opportunities. The visit took place in November 2016 facilitated by DFAT.

Mr Subhash Chandra, Joint Secretary, Ministry of Mines (India) visited **Dr Mohan Yellishetty, Professor George Simon** and **Professor Jeff Walker** in November 2016.

**Professor Julia Lamborn, Dr Mohan Yellishetty** and team attended the 27th Australasian Association for Engineering Education Conference in Coffs Harbour in December 2016.

As Founding Director of Monash Infrastructure, **Professor Ana Deletic** led the establishment of this University-wide inter-disciplinary institute as well as establishing MI’s Executive Group, which includes representatives from five Faculties. Ana also co-ordinated development of four large inter-disciplinary industry focused projects. In December 2016, Monash Infrastructure submitted a large ARC Industrial Transformation Research Hub and was awarded a Sino-Australia Centre on Sponge City in Nanjing, fully funded by Chinese industry.
Events

The 2016 Departmental Annual Awards Dinner was held on Wednesday 15th June at the Monash Residential Services function room. 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 Peter Coleman, CEO of Woodside Petroleum was awarded the Alumnus of the Year for 2016 and in his absence, Dr Robert Edwardes, Executive Vice President of Development at Woodside, gave the after-dinner address.

Mr Frank Winston was also farewelled in June and we wish him a wonderful retirement with his new coffee machine.

After 43 years of extremely dedicated service to the Department, Mr Chris Powell retired in October 2016. He was fondly farewelled at the New Horizons Collaboration Lounge, with speeches given by Prof Jeff Walker, Prof Bill Young, Mr Stelios Konstantinidis, Emeritus Prof Peter Darvall and Dr Chris Haberfield.

A/Prof Bill Wong was farewelled from the Department in June 2016. Bill was given some golf clubs and a very wobbly golf ball. We wish him all the very best in his retirement and with chasing that little white ball around!
HIGHLIGHTS

Left to right: Prof Gary Codner, Dr Chris Haberfield, Emeritus Prof Peter Darvall, Mr Chris Powell, Mr Roger Newham & Mr Harry Bracegirdle

Open Day 2016 was held in the engineering exam halls with a large number of students and parents in attendance. Thanks to all staff and students who volunteered their time to assist on a weekend.

Prof Jerry Tien retired from the department in late November 2016. Jerry worked hard with Prof Gary Codner and Dr Mohan Yellishetty to set-up the mining program for the department in 2013. We wish Jerry all the very best for his retirement!

The 2016 Departmental Retreat was held in November at the RACV Cape Schanck Resort and was very well-attended by staff, including Dr Vivi Anggraini all the way from the Sunway campus.

Workshop topics were: department performance strategy; dealing with large class sizes; teaching equipment & space; working as teams; lab & office space; industry engagement; & technical support.

The Day 1 workshop sessions were followed with the “Challengearama” team building activity, which was great fun! Then more fun was had at dinner with the “Would I Lie to You?” game, which was organised by Prof Jeff Walker and Ms Noi Souvandy. Thanks also go to Narelle Ayson for organising a very successful and enjoyable event!
This year’s **Christmas Party** was held at Wetlands Mini Golf in Wheelers Hill. It was a great fun day with lots of good (and bad) golf, beautiful weather, great food and plenty of fun and frivolity!

**Vale Alan Parkin**

Dr Alan Parkin, one of the key founders of Geomechanics at Monash, sadly passed away on 18 April, aged 78. Alan was a senior lecturer at Monash University for 26 years (1970-1996). He joined SMEC in 1997 and was still a staff member at the time of his passing.
2. OUR PEOPLE

2.1 Management Committee

In 2016, the Management Committee of the Department consisted of:

Prof Jeff Walker Head of Department
Prof Geoff Rose/Prof Jayantha Kodikara Deputy Head of Department
Prof Julia Lamborn Director of Teaching
Prof Graham Currie/A. Prof Wenhui Duan Director of Research
Prof Jian Zhao/Prof Hai Vu Director of Research Training
A/Prof Yu (Barry) Bai Director of International Affairs
Mr Christopher Powell Director of Resources
Ms Rachel James Department Manager
Prof PG Ranjith Head of Geomechanical Engineering
Prof Jerry Tien/A/Prof Bre-Anne Sainsbury Head of Resources Engineering
Dr Amin Heidarpour Head of Structural Engineering
Prof Geoff Rose Head of Transport Engineering
A/Prof Valentijn Pauwels Head of Water Engineering

Meetings of the Management Committee were held monthly.

2.2 Industry Advisory Committee

The Industry Advisory Committee was established in 1999. Meetings of the Committee were held on 15th June and 23rd November 2016 at the Clayton campus. The 2016 membership of the Committee was as follows:

Industry members:
Dr Gamini Adikari Technical Principal of Dams, SMEC
Mr John Bahoric Associate Director, Bonacci Group
Dr Bruce Brown Consultant (mining engineering)
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 Water Resources Engineer, Integrated Planning, 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
Prof James Murray-Parkes Head of Science & Engineering, Brookfield Multiplex Engineering Innovations Group
Dr Rory Nathan Melbourne University
Mr Jim Papadimitriou Transport Services Leader, Aurecon
Mr Ian Pitcher Operations Director, VicTas, 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
Prof Julia Lamborn Director of Teaching
Prof Graham Currie/A/Prof Wenhui Duan Director of Research
Prof Jian Zhao/Prof Hai Vu Director of Research Training
A/Prof Yu (Barry) Bai Director of International Affairs
2.3 Occupational Health and Safety Committee

The Civil OHS Committee was established in 2008. Membership of the committee in 2016 was as follows:

Prof Jeff Walker  Chairperson
Mr Mike Leach  Deputy Chairperson and Safety Officer
Mr Chris Powell/Ms Rachel James  Deputy Safety Officer
Mr Richard Williamson  OHS representative
Mr Mark Taylor  Deputy OHS representative
Ms Rebekah Henry  Biosafety Officer
Ms Christelle Schang  Deputy Biosafety Officer
A/Prof WenHui Duan  T&R staff representative
Dr Xiaoling Wu  Research staff representative
Miss Shaohua Zhang  Postgraduate representative
Ms Margaret Rendell  Faculty OHS&E Advisor

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

2.4 Research Groups

In 2016 the department operated through the following five disciplines:

2.4.1 Geomechanical Engineering

Geomechanical Engineering was led by Prof PG Ranjith and included Prof Malek Bouazza, Prof Jayantha Kodikara, Prof Julia Lamborn, Dr Asadul Haque, Dr Ha Bui, Dr Chi Nguyen, Dr Ben Shannon, Dr Ivan Zhang, Dr Derek Chan, 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, shale gas recoveries.

2.4.2 Resources Engineering

Resources Engineering was led by A/Prof Bre-Anne Sainsbury and included Prof Jian Zhao, Prof Jerry Tien, A/Prof Stephan Arndt, Dr Mohan Yellishetty and Dr Qianbing Zhang.

Research Strengths: Mine ventilation; methane and dust control; diesel particulate emission control measures; mine fires and firefighting; mine emergency planning; fundamental and applied mining rock mechanics and tunnelling technology; rock fracturing mechanisms, dynamic loading; deep rock geothermal energy and induced seismicity; mine reclamation; environmental impacts and management due to mining.

2.4.3 Structures Engineering

Structures Engineering was led by Dr Amin Heidarpour and included Prof Xiao-Ling Zhao, A/Prof Yu (Barry) Bai, A/Prof Wenhui Duan, A/Prof Bill Wong, Dr Colin Caprani, Dr Phu Nguyen, Dr Ye Lu, Dr Lizi Sironic.

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

2.4.4 Transport Engineering

Transport Engineering was led by Prof Geoff Rose and included Prof Graham Currie, Prof Hai Le Vu, Prof William Young, Dr Alexa Delbosc, Dr Chris De Gruyter, Dr Kun An, Dr Mohsen Ramezani, Dr Meead Saberi, Dr Marilyn Johnson, Dr Inhi Kim, Mr John Clements, Mr Bill Kilpatrick and Ms Brenda O'Keefe.
OUR PEOPLE

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

2.4.5 Water Engineering

Water Engineering was led by A/Prof Valentijn Pauwels and included Prof Ana Deletic, Prof Jeff Walker, A/Prof David McCarthy, Dr Edoardo Daly, Dr Peter Bach, Dr Gayani Chandrasena, Dr Gift Dumehad, Dr Stefania Grimaldi, Dr Belinda Hatt, Dr Rebekah Henry, Dr Yuan Li, Dr Sandra Monerris-Belda, Dr Gavin Mudd, Dr Emily Payne, Dr Chris Rüdiger, Dr Christian Uriach, Dr Xiaoling Wu, Dr Nan Ye, Dr Kefeng Zhang, Mr Tony Brosinsky, Mr Peter Kolotelo, Ms Christelle Schang, Mr Richard Williamson, Mr Frank Winston and Mrs Louise 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.

2.5 Staff List

Professors
Abdelmalek Bouazza CivEng 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
Ranjith Pathegama Gamage BSc(Eng)(Hons) Moratuwa PhD Wollong Masce Charma FIEAust MIsrmi
Julia Lamborn BE(Civil) SIT GradDip(ChemEng) SIT MEng SUT PhD SUT FIEAust CPEng EngExec Ner Apec Eng IntPE
Geoffrey Rose BE(Hons) Queensland IT MSc PhD Northwestern MIEAust Mite Maitpm
Jerry Tien PhD, MBA, PE
Jeff Walker BE(Hons) BSc(Hons) Newcastle PhD Newcastle FIEAust
Le Hai Vu BE TUB Msc TUB PhD TUB
Jian Zhao BSc Leids PhD Dic London FIEAust
Xiao-Ling zhao BE ME Shanghai JT PhD DEng Syd EmBa NSW & Syd FIEAust FASCE FIIFC MSSrc

Associate Professors
Yu (Barry) Bai BE(Struct) Tsinghua MEng(Struct) Tsinghua PhD Epfl
Wenhui Duan BE Tianjin MEng Tianjin PhD Nus
David McCarthy BSci BE(Hons) PhD Monash
Valentijn Pauwels BAgEng Ugent MACivEng Princeton PhD CivEng Princeton
Bre-Anne Sainsbury BE (Hons) Rmit ME PhD unsW MIEAust Mausimm
Man Biu (Bill) Wong BE(Eng) BSc(Eng) London PhD UNSW CEng MIEAust CPEng

Senior Lecturers
Edoardo Daly BE ME Turin PhD Turin GradcertHighEd Monash
Asadul Haque BScEng KBIT MEng AIT PhD Wolong GradcertHE Monash MIEAust
Belinda Hatt BAppSci(Hons) Rmit PhD Monash
Amin Heidarpour BSc IUT MSc Sharif PhD UNSW
Victoria Lamb BEng (Envir, Chem) Monash
Gavin Mudd BEnvEng(Hons) RMIT PhD VUT MSEE MAusimm MSEG MISE
Christoph Rudiger BE(Hons) PhD Melbourne
Elizabeth Sironic BE DIC MSc PhD Monash
Mohan Yellishetty BE Osmania Mtech IVITBombay PGDEM Uni hyd PhD Monash MAusImm (CP), Asaimm

Lecturers
Kun An BE(Hons) Tongji PhD HKUST
Ha Hong Bui BE(Hons) Hcmut MEng Rits PhD Rits
Colin Caprani PhD Ucd BSc(Eng) TCD DipEng Dit CEng CPENG MIEAust MIEI MIABSE Masce MIstructE
Alexa Delbosc BA Lewis & Clark MA Harvard PhD Monash Muijr AITPM
Inhi Kim BE Kongju MEng Kongju PhD Qut
Ye Lu BE ME BUAA PhD Sydney
Phu Nguyen BE HUT MSc ULg PhD Tud
Mohsen Ramezani BSc MSc UtEhran Iran PhD (Transportation) Epfl Switzerland
OE PEOPLE

Meead Saberi  BE MSc (Transportation) PortlandSU PhD (Transportation) Northwestern USA
Christian Urich  DipEng Innsbruck
Qianbing Zhang  BE SWJTU MSc SDU PhD EPFL
OUR PEOPLE

Senior Research Staff
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
Kayvan Aghabayk  PhD  Monash
Peter Bach  BE(Hons)  Monash  PhD  Monash
Derek Chan  BEng(Civil)  RMIT  MEngSc  Monash  PhD  Monash
Gayani Chandrasena  BSc(Eng)  Ruhuna  PhD  Monash
Shujian Chen  BE  PhD  Monash
Xavier Choi  BE(Hons)  PhD  GradDip Computing
Ying Gao  BE  PhD  Monash
Chris De Gruyter  BE  Monash  MTrans  Monash  PhD  Monash
Gift Dumedah  BSc(Hons)  KNUST  MSc  SFU  PhD  Guelph
Stefania Grimaldi  ME  CivEng  PhD  PUTurin
Asghar Korayem  PhD  Monash
Rebekah Henry  BSc (Hons)  Griffith  PhD  Monash
Jian Ji  BE  Xi’an  UST  MSc  Xi’an  Jiaotong  PhD  Nanyang  Tech
Wengui Li
Yuan Li  BSc  BNU  MSc  BNU  PhD  Melb
Reza Mohajerpoor
Alessandra Monerris-Belda  BE  Valencia  PhD  Catalunya
Chi Nguyen
Emily Payne  BSc  BE  (Hons)  Melbourne  PhD  Monash
Samintha Perera  BSc(Hons)  Peradeniya  MEng  Saitama  PhD  Monash
Suranji Rathnayaka  PhD  Monash
Benjamin Shannon  BE(Hons)  BSc  Monash  PhD  Monash
Sina Sinaie  PhD  Monash
Xiaoling Wu  BE  Zhejiang  PhD  Monash
Nan Ye  BE  Tsinghua  PhD  Monash
Chunsun (Ivan) Zhang  BE  HUT  MSE  HUT  PhD  USyd
Kefeng Zhang  BE  PhD  Monash
Changxi Zheng  BMatPhy  Lanzhou  Gansu  MMatSciEng  Sun  Yat-Sen  Guandong  PhD  Monash

Research Officers
John Clements  BCom(Hons)  Dip Ed  Melb  MEC  MAdmin  Monash
Peter Kolotelo  BSc  Masters
Christelle Schang  BE

Administrative Staff
Narelle Ayson – Executive Assistant to HOD
Tara Fry – Resources Officer
Rachel James – Department Manager
Min Major – Postgraduate Administrative Officer
Jenny Manson – Research & Postgraduate Manager
Brenda O’Keefe – Administration Manager ITS Monash
Chris Powell – Director of Resources
Monica Sanders – Executive Assistant to Director of Monash Infrastructure
Irene Sgouras – Undergraduate Administration Manager
Noi Souvandy – Resources Officer

Technical Staff
Anthony Brosinski – Technical Officer
Zoltan Csaki – Technical Officer
Jeffrey Doddrell – Technical Officer
Peter Dunbar – Technical Officer
Long Kim Goh – Laboratory Manager
Michael Leach – Technical Officer
Mark Taylor – Senior Technical Officer
OUR PEOPLE

Philip Warnes – Senior Testing Officer
Richard Williamson – Senior Technical Officer
Frank Winston BE(Hons) MEngSc – Senior Technical Officer
OUR PEOPLE

Honorary Members of the Department

**Adjunct Professors & Associate Professors**

- **Riadh Al-Mahaidi** BSc(Civil Eng)(Hons) Baghdad MSc Cornell PhD Cornell FIEAust MASCE CPEng
- **Omid Ejtemai** DipIT Darmstadt
- **Zhiyuan (Terry) Liu** BTranspEng(Hons) SEU PhD NUS
- **Masoud Motavalli** PhD ETH-Zurich
- **Ronald Kerry Rowe** BE(Hons) Sydney, PhD Sydney, DEng Sydney, FEng, FRSC, FCAE, FEIC, FACE, FIEA, FCSE, PEng
- **Ahmad Shayan** BAgrEng, Cert Hydrology & Groundwater Eng, Post-grad Dip(Soil Sc), PhD(Soil Sc)
- **Chien M Wang** BE(Civil)(Hons) Monash MEngSc Monash PhD Monash
- **Xiaoming Wang**
- **Man Biu (Bill) Wong** BSc(Civil) London PhD UNSW CEng FIEAust CPEng
- **William Young** BE(Hon) NSW MSc PhD Monash GradDipMgt MBA Deakin FIEAust FITE FCIT MAITPM MPAA

**Adjunct Senior Lecturer**

- Richard Knight
- Vincent Lemiale

**Adjunct Research Associates**

- **Laurence Aldridge**
- **Gary Au**
- **Christopher Haberfield** BSc Sydney BE(Civil) Sydney PhD FIAust MAGS MISRM MISSMGE
- **Robert Keller** BE(Hons) PhD Canterbury NZ MASCE MIEAust MIPENZ
- **Tony Ladson** BE(Hons) Melbourne MSc Minnesota PhD Melb GradCertHighEd
- **Max Lee**
- **James Murray-Parkes**
- **Julian Seidel** BE(Hons) PhD MIEAust CPEng
- **Marcello Serini**
- **Geoffrey Taplin** BE(Hons) Tas MEngSc PhD CPEng NPR MICE MStructE MIEAust

### 2.6 Staff changes in 2016

#### New Staff Members

- **Prof Hai Vu**
- **Dr Kun An**
- **Dr Asghar Korayem**
- **Dr Sina Sinaie**
- **Dr Reza Mohajerpoor**
- **Ms Lyn Harris**
- **Mr Paul Fisher**
- **Miss Kiri Mason**
- **Ms Min Major**
- A/Prof Stephan Arndt
- Dr Phu Nguyen
- Dr Shujian Chen
- Dr Suranji Rathanaka
- Ms Rachel James
- Mrs Monica Sanders
- Ms Noi Souvandy
- Mr Saravan Mani
- Mr Ian McHugh

#### Promotions

Associate Professor Wenhui Duan was promoted to Professor (effective 1 January 2017)

Dr Ha Bui, Dr Colin Caprani and Dr Alexa Delbosc were promoted to Senior Lecturer (effective 1 January 2017)

#### Resignations / Departures

- **Prof Jerry Tien**
- **Dr Saminthha Perera**
- **Dr Chi Nguyen**
- **Dr Alessandra Monerris**
- **Dr Derek Chan**
- **Mr Chris Powell**
- **Mr Frank Winston**
- **Mr Geoff Fletcher**
- **Dr Mohsen Ramezani**
- **Dr Wengui Li**
- **Dr Gift Dumedah**
- **Dr Will Gates**
- **Dr Gayani Chandrasena**
- **Dr Kayvan Aghabayk**
- **Ms Louisa Krol**
- **Mr Paul Fisher**

2.7 Visitors to the Department

The following people visited the Department of Civil Engineering in 2016:

**Visiting Academics**

- **Prof Tao Xu and Prof Shengqi Yang** from Northeastern University visited Prof PG Ranjith from 18/07 to 15/08/2016.
- **A/Prof Amit Kumar Verma** from Indian School of Mines (Dhanbad) visited Prof PG Ranjith from 06/05 to 22/07/2016.
- **Dr Chenhui Wei** from Northeastern University visited Prof PG Ranjith from 30/06 to 31/12/2016.
- **Dr Zhengzheng Wang** from Dalian University of Technology visited Prof Jian Zhao from 19/10/2016 to 30/09/2017.
- **A/Prof Diyuan Li** from Central South University (China) visited Prof PG Ranjith from 9/11/2016 to 6/05/2017.
- **A/Prof Xiaowei Cheng** from Southwest Petroleum University visited A/Prof Wenhui Duan from 22/11/2016 to 21/05/2017.
- **Dr Mavinakere Eshwaraih Raghunandhan** from Monash University Malaysia Campus visited Prof Jayantha Kodikara from 26/09 to 1/10/2016.
- **Dr Adrien Guyot** from University of Queensland visited Dr Edoardo Daly from 22-24/08/2016.
- **Prof Shikuo Cheng** from Southwest Jaitong University visited Prof PG Ranjith in February 2016.
- **Dr Wei Lu**, Vice President, Mine Fire and Explosion Prevention Research Center, Chongqing Research Institute, China Coal Technology & Engineering Group Corp; Chongqing (China) visited Prof Jerry Tien from 5/01 to 31/12/2016.

**Occupational Trainees**

- **Ms Qingqing Zhang** from Southeast University (China) visited A/Prof Wenhui Duan from 02/01 to 30/06/2016.
- **Mr Yang Hong** from Southeast University (China) visited Dr Mohsen Ramezani from 27/01 to 01/07/2016.
- **Ms Johanna Elvy** from University of Leeds visited Prof Graham Currie from 9/02 to 28/03/2016.
- **Mr Simone Gelsinari** from Università di Pisa visited A/Prof David McCarthy from 16/02 to 08/05/2016.
- **Mr Sako Kazunari** from Kagoshima University visited Dr Ha Bui from 12/05/2016 to 31/03/2017.
- **Mr Mohamed Boukerb** from Université Claude Bernard Lyon 1 visited A/Prof David McCarthy from 19/09 to 30/11/2016.
- **Mr Junyong Zhou** from Tongji University visited Dr Colin Caprani from 20/09/2016 to 28/02/2017.
- **Mr Yi Xue** from China University of Mining & Technology visited Prof PG Ranjith from 20/09/2016 to 20/03/2017.
- **Mr Fuping Zhang** from Wuhan University visited Prof Jian Zhao from 26/09/2016 to 25/09/2018.
- **Mr Xiao Tan** from Wuhan University visited Prof Jeff Walker from 28/09/2016 to 31/08/2017.
- **Mr Mingtao Xu** from Southeast University (China) visited Prof Jian Zhao from 03/10/2016 to 19/09/2018.
- **Ms Zhiwen Liang** from Jiangsu Transportation Institute visited A/Prof Yu Bai from 12/10/2016 to 30/09/2017.
- **Mr Jianjian Zhao** from China University of Mining & Technology visited Prof PG Ranjith from 14/10/2016 to 10/10/2017.
- **Mr Sen Wen** from Henan University visited Prof Jian Zhao from 19/10/2016 to 09/10/2017.
- **Mr Tao Gu** from Northeastern University visited A/Prof Wenhui Duan from 15/11/2016 to 14/11/2017.
- **Mr Chenglong Wang** from Chongqing University visited Prof Malek Bouazza from 18/11/2016 to 17/11/2017.
- **Mr Zhentao Li** from China University of Geosciences visited Prof PG Ranjith from 21/12/2016 to 14/11/2017.
3. **EDUCATION**

3.1 **Course Offerings**

The Department offers *undergraduate single degrees* in the fields of Civil Engineering, Environmental Engineering and Resources Engineering. The Civil Engineering program is also combined with Arts, Law, Commerce and Science disciplines to offer various *undergraduate double degree* options.

The Department offers *on-campus Master of Advanced Engineering degrees* in the fields of Transport, Water and Infrastructure Architecture, and also *off-campus Masters degree* in the fields of Transport & Traffic, and Infrastructure Engineering and Management.

The Department also has a joint graduate school with South Eastern University at Suzhou in China, and delivers the BEng(Civil) at the Monash Sunway campus in Malaysia, as well as the international program with CSU at Changsha, China.

The Department currently has 950 undergraduate and 150 higher degree research students.

3.2 **Undergraduate scholarships and prizes**

**Scholarships**

Golder Associates Scholarship

![Golder Associates Scholarship](image1)

Winner: Joel Docker

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

![Traffix Group Scholarship](image2)

Winner: Joel Docker

Traffix Group Scholarship:
Level 3

![Traffix Group Scholarship](image3)
Winner: Joshua Williams

CPB Contractors – Keith Rix Scholarship

Winner: Thomas Ruddell

Winner: Solomon Lin

Prizes

Civil Contractors Federation presents
The Ian Jacka Award

Winner: Iresha Dissanayake

GHD Civil Engineering Award Prize
(Top Level 4 Graduate 2015)

Winner: Matthew Molloy
(accepted by his parents)
Golder Associates Prize

Winner: Desmond Manuelpillai

The Geofabrics Pty Ltd Prize

Winners: Zoe Anagnostakos, Lachlan Summers & Sylvia Korlos

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: Anna Chan (no photo available)

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: Robert Rae (no photo available)

Railand Prize for Water Engineering
(For best overall performance in the Level 2 water engineering unit CIV2263)
Coffey Geotechnics Prize for Geo-engineering
(For best overall performance in the Level 2 geomechanics unit CIV2242)

Winners: Louis O’Connor

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

Winners: Alice Barnett & Richard Waid

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

Winner: Sarah Chancellor-Goddard

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

Winners: Kirstine Cooley, Luke Davrain, Jacob Frydenberg & Adam Jones

Douglas Partners Prize for Geomechanics
(For best overall performance in Level 3 geomechanics units CIV3247 & CIV3248)
Railand Prize for Water Engineering
(For best overall performance in the Level 3 water engineering unit CIV3264)

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

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)

Winner: Dylan Noronha

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

Winner: Saul Block

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

Winners: Alice Barnett & Hannah Bragge (no photo available)

AECOM Civil & Environmental Engineering Practice Prize

Winners: Dulan Dantanarayana, Khuzair Rehan, Andrew Wegman & Suthan Mohanakumar
Minova Award for Excellence in Surface Mining Systems

Winner: James Curwood

Minova Mining Leadership Award

Winner: Nicholas Burri

3.3 Undergraduate students who completed in 2016

Bachelor of Engineering (Civil)
Yin Haur David Lim
Paschalis Natis
Hesed Yeuk San Chan
Michael Srea
Matthew Scata
David Bassili
Adam Gardiner
Hao Luo
Aayan Raza
Michael Sullivan
Yangtao Chang
Conor Hogan
Vincent Jia
Yue Yao
Winho Wing Ho Cheung

Bachelor of Engineering (Civil) with Honours
Supun Mendis
Hugh Wallace
Stephen Brodie
Alex Campbell
HuiXiang Zhou
Marcus Koom
Lital Adler
Shirlly Hui Heng Lau
Ali Bassam Saleh
Rahul De Livera
Charlie Tan
Zihua Li
Joshua Jakobi
Kately Richter
Nathan Haupt
James Sui Ung Chiong

Aaron Montgomery
Michael McKinna
Sarah Bugoss
Brandon Vassallo
Andrew Theodolou
Doo Jin Baek
Rivario Savio
Hsien Sheng Hwang
Kin Shun Tham
Wenshen Zhong
Sze Chun Simon Lui
John Lopez
Bian Wu
Daniel Jordan
Xuan Kai Zhao
Xupey Yao
Evan Williamson
Kenneth Ewe
Sijia Ji
Chuqi Wan
Robert Maroney
Yu Fung Lee
Rahman shafi
Baiqian Shi
Michael Synan
Yasas Garusinghe

Bachelor of Engineering (Civil) with Honours cont.
Christopher Nikcevich
Cheng Ke Ruan
Fredrik Carlstrom
Toby Maywald
Ajay Kalia
Jaykerr Cheong
Joshua Teck Jiu Kung
Xiaohan Ci
Aditbir Kakkar
Michael Kuan-Jen Chen
Yvette Hall
Roshan Manage Don
Mingdong Xie
Daniel Heap
Lihao Yuan
Jordan Smith
Catherine Yang
Manmit Singh
Calvin Sii Hong Yii
Mohammad Ahmadi
Phyo Myint Aye
Nguyen Minh Huy Pham
Thomas Lancaster
Roy Istoven
Nipun Jayasinghe
Chanitha Rathnayake
Ka Long Ng
Ahmed Al-Hilli
Annabella Reaper
Omar El-Khub
Samuel Ming Yin Chau
Margaret Gleeson
Xinwhen Shi
Minhao Geng
Sui Du
Mustafa Hassan

Bachelor of Arts and Bachelor of Engineering (Civil) with Honours
Cindy Tu
Travis Bail
Joel McCreanor

Bachelor of Science and Bachelor of Engineering (Civil)
Andrew Stevenson
Nicholas van Agtmaal

Bachelor of Science and Bachelor of Engineering (Civil) with Honours
Simon Harbig
George Hamer
John Tuan Nguyen
Matthew Curtain
Angeline Ha
Joshua Parish
Declan Frey
Nicholas Macwilliams

Bachelor of Science and Bachelor of Engineering (Civil) with Honours cont.
Kajanu Maheswaran

Bachelor of Commerce and Bachelor of Engineering (Civil) with Honours
Khuzair Rehan
Nicholas Pederson

Shaun Collins
Andrew Cameron
Thomas Goodrich
Belinda Chung
Sylvia Truong
Fabio Lim
Luke Darvrain
James Freeman
James Cossins
Jade Waite
Harrison Byrnes
Greg Pollard
Michael Byrne
Ricci Steckoll
Jacob Frydenberg
Darcy Van Lier
Solomon Lin
Miranda Newnham
Simeon Khaw
Ashley Bailey
Jackson Shui Fung Law
Minghao Li
Sunny Chan
Nathan Lindner
Shalit Millawitiya
Byron Tabet
Ken Xhen Woon
Jason Moore
Yekai Huang
Robert Hay
Jordan Stapleton
Patrick Caulfield
Daniel Distiller
Tony Yip
Xavier Calgaro
Aaron Landberg
Zoran Dukanovic
Joel Calcinotto
Benjamin Ung
Kavinda Kottege
Nathan Crouch

Bachelor of Engineering (Civil) and Bachelor of Laws with Honours
Tony Tang
Boris Trakilovic
Thevasuthan Mohanakumar
Malcolm Mo Liu
Boris Trakilovic
Madeleine Foote

Bachelor of Mining Engineering with Honours
Georgia Clayfield
Shannon McMahon
Gonglinan Wu
Dylan Goldhahn

Bachelor of Mining Engineering with Honours cont.
Laura Wiesenekker
Roshankyu Perera Karawita
Nicholas Burri
Frank Bird

**Bachelor of Environmental Engineering with Honours**
Peiyang Xu
Shiheng Gong
Chloe Lanters
Xinyun Zhang
Sachini Jayakody
Gaomin Liu
Sophie Porter
Hiruni Eriyagama
Shulun Liu
Thi Hiep Pham
Yifan Zhang
Tingwen Sun
Camille Skovell
Hui Xuean Chua

**Bachelor of Environmental Engineering and Bachelor of Science with Honours**
Jenson Seaw

**Bachelor of Environmental Engineering and Bachelor of Commerce with Honours**
Kunyao Wu

**Bachelor of Environmental Engineering & Bachelor of Arts with Honours**
Benjamin Stephens
Hsueh-Wen Louis Chen

**Bachelor of Civil & Environmental Engineering**
Dominic Piekaar
Robert Essler
Tize Ying Ding

**Bachelor of Civil & Environmental Engineering with Honours**
Aaron Stevens
3.4 2+2 Program

In 2016, we received 17 2+2 students in total, including 16 students in Civil from Central South University (CSU) in Changsha (China) and 1 student in Environmental from Tongji University in Shanghai (China).
4. RESEARCH

4.1 Research grants and income

Research Funding for 2016 was as follows:

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Researchers</th>
<th>Planned Project Duration</th>
<th>Total Monash Project Budget</th>
<th>2016 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>DP140100572 MoistureMonitor: A multi-mission soil moisture monitoring system</td>
<td>Walker, Jeffrey; Rudiger, Christoph; De Jeu, Richard; Entekhabi, Dara;</td>
<td>2014-2016</td>
<td>$554,181</td>
<td>$122,359</td>
</tr>
<tr>
<td>for a water limited future</td>
<td>Jackson, Thomas J; Kim, Edward J; Merlin, Olivier; Renzullo, Luigi J</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DP140103679 Forecasting drought impacts months ahead using satellite data</td>
<td>Pauwels, Valentijn RN; Tregoning, Paul; Van Dijk, Albert J JM; Dejeu,</td>
<td>2014-2016</td>
<td>$30,000</td>
<td>$10,000</td>
</tr>
<tr>
<td></td>
<td>Richard; Sheffield, Justin; Wood, Eric</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DP150103557 Enhanced Prediction of Landfill Gas Emissions Through Geosynthetic</td>
<td>Bouazza, Abdemalek; Rowe, Ronald K</td>
<td>2015-2017</td>
<td>$235,100</td>
<td>$115,100</td>
</tr>
<tr>
<td>Systems</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>DP150100442 Behaviour of ultra-high strength double-skin composite tubular</td>
<td>Zhao, Xiao L; Heidarpoor Esfarjani, Amin; Al-Mahaidi, Riadh SH; Han, Lin-Hai</td>
<td>2015-2018</td>
<td>$205,500</td>
<td>$105,500</td>
</tr>
<tr>
<td>construction</td>
<td></td>
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<tr>
<td><strong>Total ARC Discovery Projects</strong></td>
<td></td>
<td></td>
<td>$352,959</td>
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<tr>
<td><strong>ARC Linkage</strong></td>
<td></td>
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<td></td>
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<tr>
<td>LP130100884 Development of advanced deterioration model for the design</td>
<td>Kodikara, Jayantha K; Bui, Ha H; Jitsangiam, Peerapong; Diaz, Luis; Leung,</td>
<td>2013-2016</td>
<td>$276,000</td>
<td>$30,000</td>
</tr>
<tr>
<td>of stabilised pavement bases</td>
<td>Gordon LM; Mcllnnes, Doug; Ramanujam, Jothi M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LP140100747 Controlling alkali-silica reaction in concrete for road pavements</td>
<td>Duan, Wenhui; Kitipornchai, Sritawat; O'Moore, Liza M; Yang, Jie; Zhang,</td>
<td>2014-2017</td>
<td>$312,500</td>
<td>$75,000</td>
</tr>
<tr>
<td>and bridge using graphene oxide and dune sand</td>
<td>Jian</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>LP140100871 Catchment water balance and CO2 fluxes: a comparison between</td>
<td>Daly, Edoardo; Beringer, Jason; Rudiger, Christoph; Walker, Jeffrey;</td>
<td>2014-2017</td>
<td>$221,282</td>
<td>$70,388</td>
</tr>
<tr>
<td>productive land uses</td>
<td>Webb; John A; Camporese, Matteo; Dresel, Evan P; Morse-Mcnnabb, Elizabeth M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LP140100369 Planning and managing road transport systems for extreme events</td>
<td>Sarvi, Majid; Seible, Frieder; Thompson, Russell G; Rajabifard, Abbas;</td>
<td>2014-2017</td>
<td>$515,193</td>
<td>$187,959</td>
</tr>
<tr>
<td>through spatial enablement</td>
<td>Leighton, Alison; Miller-Hooks, Elise; Wall, Andrew R</td>
<td></td>
<td></td>
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<tr>
<td>LP140100516 Waste Containment Lining Systems for Antarctica: Ensuring their</td>
<td>Bouazza, Abdemalek; Gates, Will P; Hornsey, Warren; Rowe, Ronald K;</td>
<td>2014-2017</td>
<td>$187,213</td>
<td>$64,257</td>
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<tr>
<td>Performance Under Extreme Conditions</td>
<td>Swifte, Brendan</td>
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<tr>
<td>LP140100543 Fatigue Strengthening of Metallic Bridges using Carbon Fibre</td>
<td>Zhao, Xiao L; Al-Mahaidi, Riadh SH; Hueppi, Martin J; Motavalli, Masoud;</td>
<td>2014-2017</td>
<td>$255,571</td>
<td>$103,812</td>
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<tr>
<td>Reinforced Polymer System</td>
<td>Powers, Nigel</td>
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<td>LP150100103 Multi-functional nano-modified cementitious materials for well</td>
<td>Duan, Wenhui; Li, Dan; Lu, Ye; Pathegama Gamage, Ranjith;</td>
<td>2015-2019</td>
<td>$220,000</td>
<td>$150,000</td>
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<tr>
<td>cementing</td>
<td>Kitipornchai, Sritawat</td>
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<tr>
<td>Project Title</td>
<td>Researchers</td>
<td>Planned Project Duration</td>
<td>Total Monash Project Budget</td>
<td>2016 Actual Income</td>
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<tr>
<td>-----------------------------------------------------------------------------------------------------------</td>
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<tr>
<td>LP150100832 Concrete Enriched with Carbon Nanotubes for Advanced Future Construction</td>
<td>Collins, Francis G; Gates, Will P; Middleton, James M; Solomon, Gregory H</td>
<td>2015-2018</td>
<td>$142,500</td>
<td>$97,500</td>
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<tr>
<td>LP150100901 Preserving vegetation health and biodiversity of natural, urban reserves</td>
<td>Daly, Edoardo; Lu, Chunhui; McGeoch, Melodie; Tapper, Nigel J; Walker, Jeffrey; Gooding, Michelle; Keenan, Maree E; Salhi, Bertrand F</td>
<td>2015-2018</td>
<td>$110,425</td>
<td>$68,099</td>
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<tr>
<td><strong>Total ARC Linkage Projects</strong></td>
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<td><strong>$847,015</strong></td>
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<tr>
<td>ARC Future Fellowships</td>
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<tr>
<td>FT130100545 A novel and theoretically consistent method for correcting systematic errors in earth observation data and earth system model results</td>
<td>Pauwels, Valentijn RN</td>
<td>2013-2017</td>
<td>$531,392</td>
<td>$147,580</td>
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<tr>
<td><strong>Total ARC Future Fellowships</strong></td>
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<td></td>
<td><strong>$301,212</strong></td>
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</tr>
<tr>
<td>ARC DECRA</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>DE140100524 Interactions between plants and faecal pathogens in urban water treatment: significance of soil microbes, plant debris, root exudates and rhizosphere</td>
<td>McCarthy, David T</td>
<td>2014-2016</td>
<td>$395,220</td>
<td>$131,740</td>
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<tr>
<td>DE140101555 Probing interaction between cement and nanoparticles at micro/nano scale</td>
<td>Zheng, Changxi</td>
<td>2014-2016</td>
<td>$395,220</td>
<td>$131,740</td>
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<tr>
<td>DE150101751 Nanofiller reinforced concrete for high performance thermal energy storage</td>
<td>Li, Wengui</td>
<td>2015-2017</td>
<td>$234,000</td>
<td>$117,000</td>
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<tr>
<td><strong>Total ARC DECRA</strong></td>
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<td></td>
<td><strong>$380,480</strong></td>
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<tr>
<td>Contract Research</td>
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<tr>
<td>Advanced Condition Assessment and Failure Prediction Technologies for Optimal Management of Critical Pipes (&quot;Critical Pipes&quot;)</td>
<td>Kodikara, Jayantha K; Chiu, Wing K; Haque, Asadul; Rajeey, Pathmanathan; Zhao, Xiao L</td>
<td>2011-2016</td>
<td>$4,501,515</td>
<td>$736,000</td>
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<tr>
<td>Learning to drive with bikes: identifying ways to increase safe driving practices</td>
<td>Johnson, Marilyn; Bonham, Jennifer</td>
<td>2014-2016</td>
<td>$42,400</td>
<td>$10,600</td>
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<tr>
<td>Project: 2014002934</td>
<td>Bai, Yu</td>
<td>2015-2017</td>
<td>$110,000</td>
<td>$55,000</td>
</tr>
<tr>
<td>Confidential Project: 2015000182</td>
<td>Tien, Jerry</td>
<td>2015-2016</td>
<td>$114,881</td>
<td>$38,296</td>
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<tr>
<td>PTRG Fund for allocating funds for the Chair of Public Transport salary</td>
<td>Currie, Graham</td>
<td>2015-2019</td>
<td>$1,000,000</td>
<td>$500,000</td>
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<tr>
<td>Confidential Project: 2015002089</td>
<td>McCarthy, David T</td>
<td>2015-2016</td>
<td>$257,192</td>
<td>$154,533</td>
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<tr>
<td><strong>Total Contract Research</strong></td>
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<td></td>
<td><strong>$1,494,429</strong></td>
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</tr>
<tr>
<td>Research Grants</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.2 Research activity in Centres

## Monash Institute of Transport Studies (Monash ITS)

The primary objective of Monash ITS is to undertake graduate teaching, executive programs, grant and contract research and development in the fields of transport, logistics, and supply chain management studies.

In 2016 the Monash Institute of Transport Studies continued to deliver transport units in the Bachelor of Engineering program. In addition to two core units (both with enrolments in excess of 300 students) ITS offers two final year electives (with enrolments of over 100 students). The undergraduate core units are delivered on both the Clayton and Kuala Lumpur campuses.

The Master of Transport and Master of Traffic degrees offered off-campus by Monash ITS began a major program of renewal in 2015, with a new unit in Transport and Traffic Data offered for the first time in 2016 and development work undertaken for a new Transport and Traffic Project unit to be offered for the first time in 2017. Major pedagogical changes were introduced into more units in 2016 with recorded lectures being introduced as a key learning resource for students. The Master of Transport Systems degree offered by Monash ITS, in conjunction with Southeast University in Suzhou (China), continues to grow and had 40 students admitted in 2016. Students in the Master of Transport Systems have the option of completing first semester in Melbourne and two students took up that option in 2016.

The Master of Advanced Engineering (MAE) is an on-campus degree offered at Monash that provides students with the scope to complete a specialisation in Transport. That program involves on-campus delivery of four core transport units, which are also offered on-line to the students enrolled in the Master of Transport & Traffic. In addition, the MAE Transport students can complete two elective units from the Master of Transport program.

ITS has the largest higher degrees by research program in the transport and/or logistics field in Australia. In 2016, one student graduated from our doctoral programs, with 33 continuing research enrolments.

In 2016, Monash ITS welcomed 17 new PhD students recruited through the Sustainable and Effective Public Transport (SEPT) Graduate Research Interdisciplinary Program (GRIP). SEPT-GRIP is a collaborative
research initiative funded by Public Transport Victoria, Vic Roads, Yarra Trams, Transdev, Metro Trains and Bus Vic in conjunction with Monash University. Seven Faculties at Monash are involved in co-supervision of the SEPT-GRIP PhD students, who are benefitted from a bespoke professional development program designed to maximise their career opportunities in academic and private industry.

Further details about Monash ITS can be found at its website: http://www.monash.edu/engineering/its

**Monash Infrastructure (MI)**

Monash Infrastructure is a virtual institute that facilitates industry and government engagement with Monash University’s extensive capabilities in infrastructure research. MI coordinates interdisciplinary teams from engineering, information technologies, business, design and social sciences. Our researchers provide the expertise, resources and access to international knowledge networks to solve infrastructure problems, develop new technologies, build industry capacity and inform government policy and planning.

Across the world, population growth and ageing infrastructure are driving strong demand for the creation of new infrastructure and for increased efficiency and productivity from existing infrastructure. Innovation is key to creating and upgrading infrastructure that is cost effective, environmentally sustainable, reliable and resilient. Research is needed to understand infrastructure requirements, generate new knowledge and develop new technologies and processes.

Monash University is best placed to lead the infrastructure research and innovation agenda as:
- We have world-renowned experts, physical assets and an interdisciplinary culture that is needed to deliver innovations in infrastructure.
- We are the largest and most networked university with industry and international organisations in Australia, with locations in Malaysia, South Africa, China, India and Italy.
- We have a strong track record in engaging with industry and delivering cutting-edge solutions that have led to commercial and societal benefits.

MI’s research strengths are in transport, water, structural engineering, planning and management, energy and information and communications.

Further details about Monash Infrastructure can be found at its website: https://www.monash.edu/infrastructure

### 4.3 Research seminars

**Research seminars by visitors to the Department**

<table>
<thead>
<tr>
<th>Presenter</th>
<th>Seminar Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Bing-Jie Ni (Univ of Queensland)</td>
<td>Modelling of nitrous oxide emissions during biological nitrogen removal: Towards sustainable wastewater management</td>
</tr>
<tr>
<td>Prof Hans Van Lint (TU Delft)</td>
<td>DITTLAB – an integrated environment for traffic data, simulation and computing</td>
</tr>
<tr>
<td>Dr Matthew Mason (University of Queensland)</td>
<td>Characterising wind loads during severe wind storms</td>
</tr>
<tr>
<td>Dr Hemanta Doloi (University of Melbourne)</td>
<td>A community centric model for ensuring social inclusivity in infrastructure projects</td>
</tr>
<tr>
<td>A/Prof Bambang Trigunarsyan (KFUPM Dhahran Saudia Arabia)</td>
<td>Implementing design-build project delivery system: An interpretive structural model</td>
</tr>
<tr>
<td>A/Prof Tayyab Maqsood (RMIT)</td>
<td>Current research trends in the construction industry and building information modelling (BIM) in construction education</td>
</tr>
<tr>
<td>Dr Clelia Luisa Marti (Curtin University)</td>
<td>Towards a better understanding of surface water resources: a real-time management system tool</td>
</tr>
<tr>
<td>Dr Victor W-C Chang (Nanyang Technological University)</td>
<td>Humans, buildings and the environment – challenges and opportunities in urban settings</td>
</tr>
<tr>
<td>Presenter</td>
<td>Seminar Topic</td>
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<tr>
<td>-----------------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Dr Tao Li (International Water Association)</td>
<td>Overview of challenges and solutions on China water sector</td>
</tr>
<tr>
<td>Dr Adrien Guyot (University of Queensland)</td>
<td>Advances in environmental sensing: examples of applications for fire and water</td>
</tr>
<tr>
<td>A/Prof John V Smith (RMIT)</td>
<td>Future of research and education for mining engineering</td>
</tr>
<tr>
<td>Prof David Hui (University of New Orleans)</td>
<td>How to write papers to enhance journal acceptance</td>
</tr>
<tr>
<td>Prof David Hui (University of New Orleans)</td>
<td>Composites under harsh environments: Civil engineering and aerospace engineering perspectives</td>
</tr>
<tr>
<td>Prof Mike Xie (RMIT)</td>
<td>Design optimisation and advanced manufacturing of innovative structures and materials</td>
</tr>
<tr>
<td>Prof Guoxing Lu (Swinburne Inst. Of Technology)</td>
<td>Research on Impact Engineering</td>
</tr>
<tr>
<td>Prof Zhong Tao (Western Sydney University)</td>
<td>Development of modern sustainable and resilient steel-concrete composite structures</td>
</tr>
<tr>
<td>Mr Boris Iskra (TPC Solutions)</td>
<td>Recent building code changes to 9 storey engineered timber buildings</td>
</tr>
<tr>
<td>Dr Lakshman Nandagiri (National Inst. Of Tech. Karnataka, Mangalore, India)</td>
<td>Modelling the hydrology of tropical catchments in the Western Ghats, India</td>
</tr>
<tr>
<td>Prof Patricia Mokhtarian (Georgia Tech. Atlanta)</td>
<td>The study of multitasking and polychronicity and its application to travel-based multitasking in autonomous vehicles</td>
</tr>
<tr>
<td>Prof Yu (Marco) Nie (Northwestern University)</td>
<td>CybeR-enabled-demand-interactive transit (CREDIT) for sustainable transportation</td>
</tr>
<tr>
<td>Dr Samiui Hasan (CSIRO)</td>
<td>Modelling urban dynamics: opportunities with big data and challenges</td>
</tr>
<tr>
<td>Professor Hai Vu (Swinburne University of Technology)</td>
<td>Real-time information modelling in stochastic transportation networks</td>
</tr>
<tr>
<td>Dr Peter Huthwaite (Imperial College London)</td>
<td>Thickness mapping via ultrasonic guided wave tomography</td>
</tr>
<tr>
<td>Professor Matthew McCabe (UNSW)</td>
<td>High resolution sensing for agriculture: from earth-observing satellites to UAVs</td>
</tr>
<tr>
<td>Dr Anton Maksimenko (Imaging and Medical Beamline (IMBL))</td>
<td>Computed tomography at the Australian Synchrotron: A new tool for your research</td>
</tr>
<tr>
<td>Professor Bas Jonkman (Delft University of Technology)</td>
<td>Advances in flood risk management in the Netherlands</td>
</tr>
<tr>
<td>Mr Bruce Liu (National Instruments)</td>
<td>Use of Labview for Civil Engineering applications</td>
</tr>
<tr>
<td>Dr Gareth Davies (Geoscience Australia)</td>
<td>Inundation modelling with ANUGA</td>
</tr>
</tbody>
</table>

Research seminars by staff and postgraduate students

<table>
<thead>
<tr>
<th>Presenter</th>
<th>Seminar Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pengfei Shen</td>
<td>Framework for real time monitoring and control of water sensitive urban design systems</td>
</tr>
<tr>
<td>Yunlong Tang</td>
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<td>Pabasara Wanniarachchie</td>
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<td>Richard Amoh-Gyimah</td>
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<td>Duy Nguyen</td>
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<td>Rui Jiang</td>
<td>Fracture and fatigue mechanism of cast iron water mains</td>
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<td>NazarAljabar</td>
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<td>Ruiqi Guan</td>
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<td>Jiashen Li</td>
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<td>Leifeng Shi</td>
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<td>Arooran Sounthararajah</td>
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<td>Fatemeh Azhari</td>
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<td>Maozhu Tang</td>
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<td>Gonzalo Guzman</td>
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<td>Wentao Jing</td>
<td>Modelling and design of transport networks with electric vehicles</td>
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### 4.4 Publications

The following patent was successfully filed in 2016: **Heidarpour, A., Zhao, X.L., Sadeghi, N.** “Connection Arrangement for Connecting a Cross-Member to a Vertical Member” (2016903472). This patent covers an innovative beam-to-fabricated column connections. Congratulations gents!

Congratulations to **Prof Xiao Lin-Zhao** on being awarded a highly cited researcher in the Civil Engineering discipline (Shanghai Ranking Consultancy and Elsevier in 2016).

Congratulations to **Dr Ha Bui** for three of his publications reaching the Top 25 Most Downloaded Articles in the last 90 days (Elsevier, 03/2016).

Congratulations to **Dr Colin Caprani** on receiving the Outstanding Reviewer Award 2016 for the Journal of Sound and Vibration.

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<tr>
<td>Journal Article</td>
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<td>Conference Publication</td>
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<td><strong>Total</strong></td>
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</table>
Books / Book Chapters


Journal Articles – Peer-reviewed


Amoh-Gyimah, R, Saberi, M & Sarvi, M 2016, 'Macroscopic modeling of pedestrian and bicycle crashes: A cross-comparison of estimation methods' Accident Analysis and Prevention, vol 93, pp. 147-159. DOI: 10.1016/j.aap.2016.05.001


Borrie, D, Zhao, XL, Singh Raman, RK & Bai, Y 2016, 'Fatigue performance of CFRP patched pre-cracked steel plates after extreme environmental exposure' Composite Structures, vol 153, pp. 50-59. DOI: 10.1016/j.compstruct.2016.05.092


RESEARCH


Gong, Q, Liu, Q & Zhang, Q 2016, 'Tunnel boring machines (TBMs) in difficult grounds' Tunnelling and Underground Space Technology, vol 57. DOI: 10.1016/j.tust.2016.05.010


Ji, J, Zhang, C, Gui, Y, Lü, Q & Kodikara, J 2016, 'New observations on the application of LS-SVM to slope system reliability analysis' Journal of Computing in Civil Engineering. DOI: 10.1061/(ASCE)CP.1943-5533.0000620


RESEARCH


Luo, FJ, Yang, X & Bai, Y 2016, 'Member capacity of pultruded GFRP tubular profile with bolted sleeve joints for assembly of latticed structures' Journal of Composites for Construction, vol 20, no. 3. DOI: 10.1061/(ASCE)CC.1943-5614.0000643


Mahanta, B, Singh, TN & Ranjith, PG 2016, 'Influence of thermal treatment on mode I fracture toughness of certain Indian rocks' Engineering Geology, vol 210, pp. 103-114. DOI: 10.1016/j.enggeo.2016.06.008


Mahbub, AA & Haque, A 2016, 'X-ray computed tomography imaging of the microstructure of sand particles subjected to high pressure one-dimensional compression' Materials, vol 9, no. 11, 890, pp. 1-17. DOI: 10.3390/ma9110890


Murari, KK, Sahana, AS, Daly, E & Ghosh, S 2016, 'The influence of the El Niño Southern Oscillation on heat waves in India' Meteorological Applications, vol 23, no. 4, pp. 705-713. DOI: 10.1002/met.1594

Naznin, F, Currie, G, Logan, D & Sarvi, M 2016, 'Application of a random effects negative binomial model to examine tram-involved crash frequency on route sections in Melbourne, Australia' Accident Analysis and Prevention, vol 92, pp. 15-21. DOI: 10.1016/j.aap.2016.03.012


Nguyen, QT, Ngo, TD, Bai, Y & Tran, P 2016, 'Experimental and numerical investigations on the thermal response of multilayer glass fibre/unsaturated polyester/organoclay composite' Fire and Materials, vol 40, no. 8, pp. 1047-1069. DOI: 10.1002/fam.2364


Ranathunga, AS, Perera, MSA, Pathegama Gamage, R & Bui, HH 2016, 'Super-critical CO2 saturation-induced mechanical property alterations in low rank coal: An experimental study' Journal of Supercritical Fluids, vol 109, pp. 134-140. DOI: 10.1016/j.supflu.2015.11.010


Rathnayaka, S, Keller, R, Kodikara, J & Chik, L 2016, 'Numerical simulation of pressure transients in water supply networks as applicable to critical water pipe asset management' Journal of Water Resources Planning and Management - ASCE, vol 142, no. 6, 04016006. DOI: 10.1061/(ASCE)WR.1943-5452.0000636
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Ruan, X, Zhou, J & Caprani, CC 2016, 'Safety assessment of the antisliding between the main cable and middle saddle of a three-pylon suspension bridge considering traffic load modeling' Journal of Bridge Engineering, vol 21, no. 10, 04016069. DOI: 10.1061/(ASCE)BE.1943-5592.0000927


Truong, LT, Kieu, LM & Vu, TA 2016, 'Spatiotemporal and random parameter panel data models of traffic crash fatalities in Vietnam' Accident Analysis and Prevention, vol 94, pp. 153-161. DOI: 10.1016/j.aap.2016.05.028

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Wong, L, Lim, K, Chiu, WK, Kodikara, J & Chowdhury, N 2016, 'Using water hammer to enhance the detection of stiffness changes on an out-of-round pipe with distributed optical-fibre sensing' Structural Control and Health Monitoring, pp. 1-10. DOI: 10.1002/stc.1975


Wu, C, Zhang, Z & Bai, Y 2016, 'Connections of tubular GFRP wall studs to steel beams for building construction' Composites Part B: Engineering, vol 95, pp. 64-75. DOI: 10.1016/j.compositesb.2016.03.081


RESEARCH


Zhang, QB, He, L & Zhu, WS 2016, 'Displacement measurement techniques and numerical verification in 3D geomechanical model tests of an underground cavern group' Tunnelling and Underground Space Technology, vol 56, pp. 54-64. DOI: 10.1016/j.tust.2016.01.029


Conference Papers – Peer-reviewed


Cao, X, Young, W, Sarvi, M & Kim, I 2016, A Study of Mandatory Lane-Changing Execution Behaviour Model for Heavy Vehicles and Passenger Cars. in Transportation Research Board 95th Annual Meeting.


Department of Civil Engineering – 2016 Annual Report Page 44
De Gruyter, CL, Rose, G & Currie, G 2016, Using theories of implementation and planning enforcement to enhance travel planning practice for new residential developments. in World Conference on Transport Research Proceedings. 14th World Conference on Transport Research, Shanghai, China, 10-15 July.


Mead, D, Johnson, M & Rose, G 2016, Factors Influencing Variability in the Usage of Secure Bicycle Parking at Railway Stations in Melbourne, Australia. in TRB 95th Annual Meeting Compendium of Papers.


Nassirnia, M, Xu, Z, Shadan, P, Heidarpour Esfarjani, A & Zhao, XL 2016, Mechanical behaviour of an innovative roadside barrier consisting of corrugated plates and ultra-high strength tubes under impact loading. in Z-X Li, H Hao, X Du & C Wu (eds), ANALYSIS AND PRACTICE OF PROTECTIVE STRUCTURES. Tianjin Chengjian University & Tianjin University, pp. 519-528.


Weerasinghe, D, Kodikara, J & Bui, H 2016, Numerical modelling of swelling/shrinkage behaviour of unsaturated soils for buried pipe stress analysis. in Z Chen, C Wei, D Sun & Y Xu (eds), Unsaturated Soil


## 4.5 Postgraduate research projects

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<td>Gupta Aditya</td>
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<tr>
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<tr>
<td>Andras Fehervari</td>
<td>Enhanced containment of hypersaline leachates with cyclic organic carbonate modified bentonite</td>
<td>Prof Malek Bouazza, Dr Will Gates, A/Prof Tony Patti, Prof Kerry Rowe</td>
</tr>
<tr>
<td>Ying Gao</td>
<td>Joint active passive microwave soil moisture retrieval</td>
<td>Prof Jeff Walker/Dr Dongryeol Ryu</td>
</tr>
<tr>
<td>Anna Lintern</td>
<td>Using sediment cores to reconstruct historical pollution records: digging up the Yarra's dirty past</td>
<td>Prof Ana Deletic, A/Prof David McCarthy/Henk Heijnis, Dr Paul Leahy</td>
</tr>
<tr>
<td>Suranji Rathnayaka</td>
<td>A study of water pressure influence on failure of large diameter water pipelines</td>
<td>Prof Jayantha Kodikara, Dr Asadul Haque</td>
</tr>
<tr>
<td>Abdur Rouf</td>
<td>Unsaturated behaviour and gas transport through geosynthetic clay liners (GCLs) and geomembrane (GMB)/GCL composite liners</td>
<td>Prof Malek Bouazza, Dr Will Gates, Prof Kerry Rowe, Dr Rao Singh</td>
</tr>
<tr>
<td>Sindu Satasivam</td>
<td>Modular FRP sandwich structures for building floor construction</td>
<td>A/Prof Yu Bai/Prof Xiao-Ling Zhao</td>
</tr>
<tr>
<td>Sina Sinaie</td>
<td>Mechanical properties of Steel and concrete under the sequential action of cyclic loading and elevated temperatures</td>
<td>Dr Amin Heidarpour/Prof Xiao-Ling Zhao</td>
</tr>
<tr>
<td>Kanjana Siampphukdee</td>
<td>Development of 3-D predictive ageing simulations of reinforced concrete port structures</td>
<td>A/Prof Frank Collins, Dr Amin Heidarpour</td>
</tr>
<tr>
<td>Mei Sun Yee</td>
<td>Remote sensing error assessment for subsequent use in model confrontation</td>
<td>Prof Jeff Walker/Dr Chris Rüdiger/Dr Edo Daly</td>
</tr>
<tr>
<td>Zhehan Weng</td>
<td>A comprehensive life cycle impact assessment of rare earth elements mining, processing and consumption</td>
<td>Dr Gavin Mudd/ Dr Simon Jowitt/Dr Nawshad Haque</td>
</tr>
</tbody>
</table>
4.7 Postgraduate Student Awards

Congratulations to Farhana Naznin on winning the ARRB-Monash Transport Research Prize for 2016.

The 2016 Eric Laurenson Medal was awarded to Kefeng Zheng from the Water Engineering group.

The 2016 Noel Murray Scholarship was awarded to Mayer Melhem.

The Department winner of the 3MT Thesis Award and Faculty people’s choice award was Nima Sadeghi.

The following awards were presented to postgrads at our Annual Dinner in June 2016:
- Best PhD Thesis was awarded to Chris De Gruyter from the Transport Engineering group for his thesis titled “Travel plans for new residential developments: Insights from theory and practice”.
- Best MEngSc (Research) Thesis and Vice-chancellor’s Commendation for Thesis Excellence was awarded to Fujia Luo from the Structures Engineering group for his thesis titled “Joining GFRP tubular profiles into space latticed shell structures”.
- The inaugural 2016 Best Tutor Award went to Fatemeh Azhari from the Structures Engineering group.
- Congratulations to Mei Sun Yee on winning the Surveying & Spatial Sciences Institute (SSSI) award.
- Congratulations to Xiaoling Wu who won the 2016 Departmental OHS award.

The 7th Annual Civil Engineering Postgraduate Conference was held at Caulfield Campus on Wednesday 23rd November 2016. The award winners announced at the conference were as follows:

A thesis tells 80,000 words photo competition
Tim Werner (1st Prize)
Mayer Melhem (2nd Prize)
Matthew Diemer (3rd Prize)
People’s Choice Winner
Tim Werner

Best Poster award
Radhika De Silva (1st Prize)
Milind Patil (2nd Prize)
Kai Lu (3rd Prize)

Best Presentation award
G P Kumari Wanniarachchige (1st Prize)
Juri Jung (2nd Prize)
Darshana Weerasinghe (3rd Prize)

Best Research Publication award
Mojtaba Farahi (Structures)
Dusan Jovanovic (Water)
Richard Amoh-Gyimah (Transport)
Mohammad Faizal (Geomechanics)
Yanlong Zheng (Resources)

2016 Monash graduates who were awarded the degree of Doctor of Philosophy at the October graduation ceremony included (Left to right, front row): Dr Suranji Rathnayaka, Dr Mei Sun Yee and Dr Ying Gao.

Supervisors present were (Left to right back row): Dr Chris Rudiger, Prof Jeff Walker and Dr Gavin Mudd.
4.8 Postgraduate Students who graduated in 2016

Graduate Certificate in Infrastructure Engineering and Management
David Charles Braby

Graduate Diploma in Infrastructure Engineering and Management
Loku Gajamange
Gayan Karunasiri
Mohamed Hany Abd El Fattah Khial
Hyungkyu Kim

Graduate Diploma in Transport & Traffic
Wayne Amos
Sonny Sidharta Suharto

Master of Infrastructure Engineering and Management
Roderick Preston Bevan
Morgan Thomas Cole
Barry Fox
Timothy James Heffernan
Carolyn Jean Madden
Marinko Popovic
Md Mezbar Rahman
Darmasiri Namachandra Ranatunga
Bruce Robertson
Sivathasan Sampasivam
Michael William Tighe
Aaron Wood

Master of Transport
Stephen James Brown
Sharon Kaur D/O Gurdip Singh
Jose Duy Tuan Dang
Qi Ding
Luke Anthony Doyle
Daniel Jordan Gray
David James Hayward
Michael Jensen
Patrick Vincent Knight
Henry Anderson Khershun Lim
Bernard Yun Soon Lo
Robert McMurchy
Raymond Zane Plasto
Duncan Steven Tjin
Jesse Kendall James Wagstaff

Master of Traffic
Joshua Ellis
Michael Kolos
Shuwen Lu
Cameron David Ward

Master of Engineering and Science (Research)
David Kam Wai Choy
Rowan Drinkwater
Fujia Luo
Negin Fouladi Moghaddam

Master of Advanced Engineering (Transport)
Bing Chang
Hamish Lachlan McDonald
Jiatian Xu
Chao Xu
Yujian Xue

Master of Advanced Engineering (Water)
Yifeng Qin
Abhimanyu Rao
Zunkai Ren

Master of Advanced Engineering (Infrastructure Systems)
Thara Roth

Master of Transport Systems, Southeast University, China
Chen Yuting
Cheng Qunqun
Yanshan Gong
Ziyuan Gu
Jing Guan
Ying Hong
Di Huang
Li Xiaoyan
Li Yuanyuan
Bin Lu
Yuxiu Qin
Weiteng Sun
Hao Wu
Guangchao Xu
Yang Yang
Hongbo Ye
Wei Zhang
Ting Zhu

Doctor of Philosophy
Mohammad Azmi
Hang Fang
Andras Fehervari
Ying Gao
Anna Lintern
Suranji Rathnayakara
Abdur Rouf
Sindu Satasivam
Sina Sinaie
Kanjana Siampukdee
Mei Sun Yee
Zehan Weng
5. SERVICE

5.1 Contribution to Professional Organisations

An, Kun (Dr)
Friend, US Transport Research Board Committee ADB30 Transportation Network Modelling

Arndt, Stephan (A/Prof)
Fellow, Australasian Institute of Mining and Metallurgy

Bouazza, Malek (Prof)
Fellow, Institute of Engineers Australia
Honorary Chair, Asian Regional Committee of International Geosynthetics Society
Member, ASTM Committee on Geosynthetics
Member, Australian Standard C20 on Geosynthetics
Member, Victorian Chapter of Australian Geomechanics Society

Caprani, Colin (Dr)
Chartered Professional Member of the Institution of Engineers of Australia
Chartered Member of the Institution of Engineers of Ireland
Member of the American Society of Civil Engineers
Member of the International Association for Bridge and Structural Engineering
Member of the International Society for Weigh-In-Motion
Member of the International Association for Bridge Maintenance and Safety
Member of the Australian Network for Structural Health Monitoring
Member, Council of the Institution of Structural Engineers
Member, Applications and Professional Review Panel, Institution of Structural Engineers
Member, Institution of Structural Engineers, Victoria Branch Committee
Member, Institution of Structural Engineers, Australia Regional Group committee
Mini-symposium organiser, MS3 Bridge Loading – Measurement and Modelling at Eight International Conference on Bridge Maintenance, Safety, and Management, Fog d'Igazu, Brazil, 2016.
Organising Committee, Australian Network for Structural Health Monitoring, 7th Annual Workshop, Monash University, Melbourne, 2016
Organising Committee, 10th AustRoads Bridge Conference, Melbourne, April 2017
Co-Editor and Secretary, International Scientific Committee, 9th International Conference on Bridge Maintenance, Safety, and Management, Melbourne, 2018

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

Currie, Graham (Prof)
Chair, US Transportation Research Board committee AP075 Light Rail Transit Systems
Member, Research Advisory Board, Land Transport Authority of Singapore

Daly, Edoardo (Dr)
Member, American Geophysical Union

Delbosc, Alexa (Dr)
Member, US Transportation Research Board committee on Social and Economic Factors of Transportation
Friend, US Transportation Research Board committee on Traveller Behaviour and Values
Member, Scientific Committee, Australasian Transport Research Forum and liaison to Local Organising Committee

Deletic, Ana (Prof)
Director, Monash Infrastructure
Fellow, Institute of Engineers Australia
Member, Australian Academy of Technological Sciences and Engineering
Grimaldi, Stefania (Dr)
Member, American Geophysical Union

Haque, Asadul (Dr)
Fellow, Institute of Engineers Australia

Johnson, Marilyn (Dr)
Member, Amy Gillett Foundation Research and Policy Committee
Victorian Chapter Deputy Chair, National Executive Committee, Australasian College of Road Safety
Member, National Executive Committee, Australian Injury Prevention Network
Organising Committee and Scientific Committee, Australasian Road Safety Conference 2016
Public Engagement and Influence Working Group, Melbourne Metro Rail Authority
Member, METEC Driver Training Centre Board
Member, Road Safety Education Scientific Advisory Committee

Kim, Inhi (Dr)
Member, US Transportation Research Board Committee AHB60 Highway/Rail Grade Crossings
Member, Institute of Engineers Australia
Member, The Korean Institute of Intelligent Transport Systems
Member, Korean Society of Transportation

Lamborn, Julia (Prof)
Fellow, Institute of Engineers Australia
Chartered Professional Engineer
APEC Engineer Experienced
International Professional Engineer
Member, Waste Management Association

Lu, Ye (Dr)
Member, Australian Network of Structural Health Monitoring
Member of Local Organising Committee of the 6th Asia-Pacific Workshop on Structural Health Monitoring, 7-9 December 2016, Hobart

Mudd, Gavin (Dr)
Member, Alligator Rivers Region Technical Committee (ARRTC) Darwin

Nguyen, Phu (Dr)
Member, International Association of Protective Structures
Member, Institute of Engineers Australia

Rose, Geoff (Prof)
Fellow, Institute of Engineers Australia
Member, US Transportation Research Board Committee ABE50 Transportation Demand Management
Member, US Transportation Research Board Joint Subcommittee on Emergency Vehicles and Personal Transportation
Member, National Steering Committee, Australasian Transport Research Forum
Co-Chair, Scientific Committee, Australasian Transport Research Forum
Local Area Representative, World Conference on Transport Research

Ranjith, PG (Prof)
Fellow, Institute of Engineers Australia
Fellow, American Society of Civil Engineers

Rüdiger, Christoph (Dr)
Member, American Geophysical Union
Senior Member, Institute of Electrical and Electronics Engineers

Sabeeri, Meead (Dr)
Member, US Transportation Research Board Committee on Traffic Flow Theory and Characteristics
SERVICE

Member, Program Committee, 2016 Intelligent Transportation Systems (ITS) World Congress, Melbourne
Member, Scientific Committee, 1st Symposium on Management of Future Motorway and Urban Traffic Systems (MFTS 2016), Greece
Theme Leader, World Symposium on Transport and Land Use Research, Brisbane, Australia

Sainsbury, Bre-Anne (A/Prof)
Member, Institute of Engineers Australia
Member, Australasian Institute of Mining and Metallurgy

Susilawati, Susi (Dr)
United States Transportation Research Board Committees: Geographic Information Science and Applications (Friend)
United States Transportation Research Board Committees: Urban Transportation Data and Information Systems (Friend)
Indonesia: International Symposium on Transportation Studies for Developing Countries

Vu, Hai (Prof)
Senior Member, Institution of Electrical and Electronic Engineers
Member, Organising Committee, 2016 Intelligent Transportation Systems (ITS) World Congress, Melbourne
Tertiary Education Sub-committee and School Engagement Sub-committee, 2016 ITS World Congress

Walker, Jeff (Prof)
Fellow, Institution Engineers Australia
Senior Member, Institution of Electrical and Electronic Engineers
Member, American Geophysical Union
Member, Modelling and Simulation Society
Science Team Member, NASA Soil Moisture Active Passive (SMAP)
Calibration & Validation Team Member, ESA Soil Moisture and Ocean Salinity (SMOS)
Science Team Member, JAXA Global Climate Observing Mission - Water (GCOM-W)

Yellishetty, Mohan (Dr)
Member, Society of Mining Professors (Germany)
Member, Australasian Institute of Mining & Metallurgy (CP-Mining)
Member, Southern African Institute of Mining and Metallurgy
Member, Mining Engineers Association of India

Zhang, Qianbing (Dr)
Member, International Association for Engineering Geology and the Environment
Member, International Society for Rock Mechanics
Member, International Society of Impact Engineering
Member, Australasian Institute of Mining and Metallurgy
Member, Australian Geomechanics Society
Member, Institute of Engineers Australia
Member, American Rock Mechanics Association
Member, Swiss Geotechnic Association

Zhao, Xiao-Ling (Prof)
Member, Invited International Experts Committee for All-China Federation of Returned Overseas Chinese, Chinese Government
Member, SAFEA (State Administration of Foreign Experts Affairs) Research Grants Panel, Chinese Government
Council Member, IIFC (International Institute of FRP in Construction)
Member, CIDECT (International Committee for the Development and Study of Tubular Structures) Expert Committee
Member, International Institute of Welding, Commission XV on Welded Structures
Member, Advisory Committee, IIFC (International Institute of FRP in Construction)
Member, Advisory Committee, International Centre for Composites in Infrastructure
SERVICE

Zhao, Jian (Prof)
Fellow, International Society of Rock Mechanics
5.2 Editorial Services

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 Board Member, Computers and Geotechnics journal

Daly, Edoardo (Dr)
Associate Editor, Hydrological Processes
Editorial Board Member, Advances in Water Resources

Delbosc, Alexa (Dr)
Editorial Board Member, Journal of Transport and Land Use
Editorial Board member, Transportation Reviews journal

Deletic, Ana (Prof)
Editor, Elsevier Water Research

Haque, Asadul (Dr)
Associate Editor, Australian Journal of Civil Engineering

Heidarpour, Amin (Dr)
Editorial Board Member, International Journal of Advanced Structural Engineering

Kim, Inhi (Dr)
Editorial Board Member, International journal of computer and software engineering
Editorial Board Member, Korean journal of intelligent transportation system

Pauwels, Valentijn (A/Prof)
Associate Editor, Water Resources Research
Review Editor, Frontiers in Hydrosphere

Ranjith, PG (Prof)
Editor in Chief, Geomechanics and Geophysics for GeoEnergy and GeoResources Energy Journal
Assistant Editor, Journal of Unconventional oil and gas resources

Yellishetty, Mohan (Dr)
Editorial Board Member, International Journal of Mining Science and Technology
Editorial Board Member, International Journal of Mining, Reclamation and Environment (Special Issue)
Editorial Board Member, International Journal of Quality Assurance in Engineering & Technology Education
Editorial Board Member, Open Journal of Energy Efficiency

Zhao, Jian (Prof)
Editor-in-Chief, Tunneling and Underground Space Technology
Editor-in-Chief, Geomechanics and Geophysics for Geo-Energy Resources

Zhao, Xiao-Ling (Prof)
Editorial Board Member, Thin-Walled Structures
Editorial Board Member, Advances in Structural Engineering – An International Journal
Editorial Board Member, International Journal of Structural Stability and Dynamics
Editorial Board Member, International Journal of Steel Construction
Editorial Board Member, Industrial Construction
Editorial Board Member, Engineering Mechanics
SERVICE

Guest Editor, Journal of Progress in Steel Building Structures
5.3 Services to Expert Bodies, Expert Advice & Media Interviews

Caprani, Colin (Dr)
Secretary, Australian National Group of International Association for Bridge Maintenance and Safety
Management Committee member, COST Action TU 1406, Quality specifications for roadway bridges, standardisation at a European level (BridgeSpec)
Member, fib Task group (TG) 8.4: Life Cycle Cost (LCC) - Design life and/or replacement cycle
Development of software for VicRoads to aid heavy vehicle access permit decision-making

Delbosc, Alexa (Dr)
Invited to contribute to the Victorian Government parliamentary inquiry into whether or not to reduce the minimum driver licensing age in Victoria
Liaison to between scientific and local organising committees, Australasian Transport Research Forum conference
‘Delay in getting driving licenses opens door to more sustainable travel’ (3,400 readers), The Conversation, 23 May 2016
Interview, ABC radio Perth, 9 Sept 2016
‘The Hack’ news program, Triple J radio, 7 Oct 2016
‘A future world full of driverless cars… seriously?!’ (18,000 readers), The Conversation, 10 Oct 2016
‘Parallel Lines’ program interview, Triple R radio, 12 Oct 2016
‘No gain in lower driving age’, The Standard, 16 Nov 2016
‘$54m lost: rogue riders flout Melbourne public transport fares’, Herald Sun, 21 Nov 2016
Article on Driverless cars, ‘By the Way’ (South African magazine), Nov 2016
In-studio interview, ‘Byte Into IT’ program, Triple R radio, 24 Nov 2016
Little to gain and much to lose from lowering the minimum driving age, The Conversation, 13 Dec 2016
Driver licensing parliamentary inquiry, ABC 774 on 13 Dec and Radio National on 15 Dec 2016

Kim, Inhi (Dr)
External advisor, Gusu police department, China

Heidarpour, Amin (Dr)
Expert advice to John Holland construction company on early age concrete in the Level Crossing Removal Project, 2016

Lamborn, Julia (Prof)

Lu, Ye (Dr)
Local Organising Committee of the 6th Asia-Pacific Workshop on Structural Health Monitoring, 7-9 December 2016, Hobart, Australia
Organiser of annual ANSHM workshop, December 2016, Melbourne, Australia

Rüdiger, Christoph (Dr)
Steering Committee, Australian Earth Observation Community Coordination Group
Scientific Committee, International Soil Moisture Workshop 2017
Scientific Committee, OzEWEX Summer School
Organising Committee, OzEWEX Workshop, Canberra, 1 December 2016

Yellishetty, Mohan (Dr)
Member of the AusIMM Melbourne Branch Working Committee from 2014-2016
Technical Chair, 4th International Engineering and Technical Education Conference, Hanoi, Vietnam
International Chair, 26th International Symposium on Mine Planning & Equipment Selection, Luleå, Sweden, 29-31 August 2016.
Organised career and course guidance and youth leadership workshops entitled ‘Be the Change Youth Workshops’ to develop the capabilities of young (14-24 years) members of community with the “VHP Australia” charity
Zhao, Xiao-Ling (Prof)
International Scientific Committee, 7th International Conference on Fibre-Reinforced Polymer (FRP) Composites in Civil Engineering (CICE 2016), 14-16 December 2016, Hong Kong, China
International Scientific Committee, 4th International Conference on Protective Structures (ICPS4), 18-21 October 2016, Beijing, China

5.4 Invited Keynote Lectures and Presentations

An, Kun (Dr)
Invited talk on “Public transport and smart features for growing cities - Metro line network optimization considering demand uncertainty” at the Research Center for Transport, Port and Shipping Development in Shanghai, 15 July 2016.

Bui, Ha (Dr)

Deletic, Ana (Prof)
Invited Keynote, 5th International Congress on Sustainability Science and Engineering, organised by American Institute of Chemical Engineers, Suzhou, China
Invited speaker, World Water Congress and Exhibition: “Shaping our Water Future”, organised by the International Water Association Congress, Brisbane

Heidarpour, Amin (Dr)
Invited Speaker, 11th International Symposium on Plasticity and Impact Mechanics, IMPLAST 2016, Delhi
Invited Speaker, International Workshop on Structural Behaviour under Extreme Loading, Tsinghua University, Beijing, October 2016

Walker, Jeff (Prof)
Invited speaker, Observationally-constrained flood forecasting in low-land areas, Lowland technology symposium, Mangalore, India, 16 Sept 2016

Yellishetty, Mohan (Dr)
Invited Lecture, RMIT University on three occasions where Bangladesh Power and Energy Sector officials were participating, funded by DFAT, Australia

Zhao, Xiao-Ling (Prof)
The 69th IIW Annual Assembly, Melbourne, 10-13 July 2016
CIDECT (International Committee for the Development and Study of Tubular Structures), Chicago, USA, 21-24 August 2016
Co-chair, International Workshop on Structural Behaviour under Extreme Loading, Tsinghua University, Beijing, October 2016
The 4th International Conference on Protective Structures (ICPS4), 18-21 October 2016, Beijing, China
International Workshop on Seawater Sea-sand Concrete Structures Reinforced with FRP Composites, 13 December 2016, Hong Kong, China
The 7th International Conference on Fibre-Reinforced Polymer (FRP) Composites in Civil Engineering (CICE 2016), 14-16 December 2016, Hong Kong, China
5.5  Administration

Departmental

Bai, Y., Director of International Affairs, Industry Advisory Committee, Management Committee, Research Committee, Lab Safety Manager  
Bouazza, M., Final Year Representative, OHS Committee  
Bui, H, Deputy Head of Geomechanics Engineering, Leader of the Civil Engineering course, Deputy Program Leader of Master of Infrastructure Engineering and Management course, Education Committee, Timetabling Coordinator, Open Day Geo rep.  
Caprani, C., Deputy Director of Teaching, Education Committee, Program Leader for Master of Advanced Engineering course and Bachelor of Civil Engineering course, Open Day Committee, Civil Engineering Coordinator for Year 8 ChallENGe  
Currie, G., Deputy Head of Transport Engineering, Deputy Director ITS, Director of Research Sem1, Deputy Director of Research Sem2, Research Committee, Management Committee  
Daly, E., Research Committee  
Delbosc, A, Alumni Relations, Research Training Committee  
Deletic, A., Deputy Head of Water Engineering, Director of Monash Infrastructure  
Duan, WH, Deputy Director of Research Sem1, Director of Research Sem2, Research Committee, OHS Committee, Research Training Committee, Library representative, Coordinator of Master of Advanced Engineering (Infrastructure), Lab Safety Manager, First Aider  
Haque, A., Program Leader of Infrastructure Engineering & Management course, Lab Safety Manager  
Hatt, B., Combined Degree representative (Clayton)  
Heidarpour, A., Head of Structures Engineering, Management Committee, Research Training Committee, Level 2 representative, Deputy Level 4 representative, Lab Safety Manager  
Kodikara, J., Deputy Head of Department Sem2, Publications Assistance, Deputy Level 3 representative, Research Committee, Management Committee, Industry Advisory Committee  
Lamborn, J., Director of Teaching, Education Committee Chair, Management Committee, Industry Advisory Committee, Mathematics Liaison Committee, Postgrad Representative, Exams and Handbook  
Lu, Y., Level 3 Representative, website editor  
McCarthy, D., Education Committee, Deputy Level 1 Representative, Lab Safety Manager  
Mudd, G.M., Education Committee, Program Leader of Environmental Engineering Course, Secondary Schools Liaison  
Nguyen, P., Open Day Coordinator  
Pauwels, V., Head of Water Engineering, Research Committee, Research Training Committee, Coordinator of Master of Advanced Engineering (Water), Theme coordinator, First Aider  
PG Ranjith, Head of Geomechanics Engineering, Research Training Committee, Management Committee, Lab Safety Manager, MUSO representative  
Rose, G., Director of Institute of Transport Studies, Head of Transport Engineering, Acting Deputy Head Sem1, Education Committee, Management Committee, Program Leader Transport & Traffic course  
Rüdiger, C., Deputy Director Research Training, Research Training Committee, Workload Officer, Work Experience & CPD Coordinator, Theme co-ordinator, Store Safety Manager  
Sabeeri, M., Research Committee  
Sainsbury, B., Deputy Head of Mining Engineering Sem1, Head of Resources Engineering Sem2, Deputy Program Leader of Mining Engineering course, Resources Engineering Advisory Board, Management Committee  
Sironic, L., Level 1 Representative, Exam Officer, Engineering Committee Representative  
Tien, J., Head of Mining Engineering, Program Leader of Mining Engineering course  
Urich, C., Friday Seminar Coordinator  
Vu, H., Director of Research Training, Research Training Committee, Management Committee, Industry Advisory Committee  
Walker, J., Head of Department, Management Committee Chair, OHS Committee Chair, Industry Advisory Committee, Resources Engineering Advisory Board, Final Year Projects  
Yellishetty, M., Education Committee, Year 8 ChallENGe, Open Day Resources representative  
Zhang, Q., International Coordinator  
Zhao, X.L., BE/BArch representative, IEAust liaison, Lab Safety Manager
SERVICE

Faculty

Bouazza, M., Faculty Discipline Panel
Caprani, C., Faculty Education Committee
Currie, G, Faculty Research Committee
Daly, E., Academic Progress Committee
Delbosc, A., Academic Progress Committee
Deletic, A., Engineering Research Committee
Duan, WH, Faculty Research Committee, Senior Lecturer Promotions Committee
Kodikara, J., Senior Lecturer Promotions Committee
Lamborn, J., Faculty Education Committee
Lu, C., Academic Progress Committee
Mudd, G M, Academic Progress Committee
Pauwels, V., Academic Progress Committee, Business & Economics Faculty Board
Rüdiger, C., Academic Progress Committee, Faculty Discipline Panel, Continuous Professional Development Steering Committee
Sabeeri, M, Early Career Researchers (ECR) Committee
Walker, J., Faculty Executive Committee
Zhao, X.L., Faculty OSP Committee

University

Bouazza, M., Academic Board
Deletic, A., Director of Monash Infrastructure, Monash Research Committee, Monash Centre for Automatically Thin Materials, Water and Sustainability in Asia (GRIP) Advisory Board
Sabeeri, M, Early Career Researchers (ECR) Committee
Walker, J., Academic Board