



**CRIOCM 2017 Conference Program**  
**International Conference of Advancement of Construction Management and Real Estate**

Date: Monday 20 - Thursday 23 November 2017

Venue: Advanced Technology Centre, Swinburne University of Technology, Hawthorn, Melbourne, Australia



**Day 1: Monday 20 November 2017**

4:00 pm – 6:00 pm: Welcome Reception and Registration at AGSE Building Ground Floor Foyer, Swinburne Hawthorn Campus

**Day 2: Tuesday 21 November 2017**

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| 8.00am – 9.00am  | Registration   |
| <b>Opening Session 9.00am to 10.30am</b>                   |  |
| <b>Chairperson: Prof Patrick Zou and Prof Jay Sanjayan</b> |  |
| <b>ATC 101</b>   |  |
| 9am – 9.30am   | Opening speeches: <ul style="list-style-type: none"> <li>• Prof Aleksandar Subic, Deputy Vice-Chancellor (Research and Development), Swinburne University of Technology</li> <li>• Ms Athena Andriotis, Director - Strategic Policy and Coordination, VIC Department of Economic Development, Jobs, Transport and Resources</li> <li>• Prof Yuzhe Wu, CRIOCM President and Zhejiang University</li> <li>• Mr Chris Buntine, ESD Leader, Aurecon</li> <li>• Prof Emad Gad, Dean of School of Engineering, Swinburne University of Technology</li> </ul> |
| 9.30am – 10.00am   | Keynote 1 – <i>The impact of real estate redevelopment on nearby property prices: A real option perspective</i> by Prof KW Chau, University of Hong Kong   |
| 10.00am – 10.30am  | Keynote 2 – <i>Digital Fabrication: Developing the Future of Construction</i> by Dr Russell Loveridge, Managing Director, ETH Zurich/NCCR Digital Fabrication, Zürich, Switzerland   |

**10.30am to 11.00am: Conference Group Photo and Morning tea, ATC Building Foyer**

| <b>11.00am – 12.30 pm: Morning Session</b>   |  |  |  |
|--|--|--|--|
| <b>Session 1</b><br><b>Building Energy Efficiency</b><br><b>ATC 101</b><br><b>Chairperson: Xiaoling Zhang</b>                              | <b>Session 2</b><br><b>Building Information Modelling, EN 303</b><br><b>Chairperson: Michael Yam</b>                           | <b>Session 3</b><br><b>Urbanisation</b><br><b>EN 304</b><br><b>Chairperson: Sungkon Moon</b>   | <b>Session 4</b><br><b>Construction Project Management, EN 307</b><br><b>Chairperson: Rebecca Yang</b>                                 |
| <b>Invited presentation:</b> Public building Retrofitting For Energy and Water Efficiency: Barriers and Coping Strategies, by Morshed Alam | Knowledge mapping of Building information modeling research – A visual analysis using CiteSpace, by Ying Nan Yang              | <b>Invited presentation</b><br>Characteristic Towns in China under the Background of the Internet+ : Origins, Actions and Risks, by Yidan Wang                     | <b>Invited presentation</b><br>Empirical Study of Knowledge Management Enablers in Large Construction Organisations, by Sherif Mohamed |
| A China's residential energy saving estimation model based on IPAT equation and LMDI decomposition by Pengcheng Xiang                      | Predesign Quantity Estimation for Building Information Modelling using Support Vector Machine by O.S. Idowu                    | The Liveability Measure in Melbourne: A Review, by Hao Wu  | Ensuring Teams Integrate Better: Views from Malaysian Construction Builders by Che Khairil Izam Che Ibrahim                            |
| A statistical yearbook data-based calculation method for building floor space in China and analysis on energy intensity by Tengfei Huo     | China's AEC Industry and BIM Adoption Challenges: Understanding the Influence of Positive and Negative Mindsets by Cheng'An Qi | Analysis of the Feature Small-town Origins and Scope in the Period of Transition by Min Tian   | Lean and Green: A Conceptual Model for Integrated Targets Design in Construction Projects by Hussein Mustafa                           |
| The Significance of the Life Cycle Embodied Energy in Shopping Centres in Australia by Kumudu Weththasinghe                                | Research on the Risk Factors of BIM Application in Construction Enterprises by Shaojian Hu                                     | An Exploration on the Planning and Positioning of Characteristic Towns in China : The Perspective of Industrial Agglomeration and Ecological Livability by Yu Yang | An analysis of Stakeholder Management in Design & Build projects in South Australia, from a client's perspective by Neroli Hutchinson  |
| A bibliometric analysis of research on building energy performance gap by Xiaoxiao Xu  | BIM- and IoT-based Framework for Building Energy Consumption and Indoor Human Comfort Management by Weiwei Chen                | Critical need for urban regeneration in Perth – a holistic view for sustainable strategy development by Stephen Dodd   | Supplier selection model in construction by Tuan Son Nguyen  |
| Occupant behaviour and its implications in energy use – A literature review By Laura Almeida   | Building Information Modelling within the Australian Prefabrication: Findings of Opportunities and Barriers by Sherif Mostafa  | Case Studies on the Barriers to Small Towns Development —— A Perspective of Southwest China by Ren Yitian  | The Name, Definition and Connotation of Engineering Management by Bingyuan Yi  |

**12.30pm – 1.30pm: Lunch, ATC Building Foyer (and CRIOCM Council member meeting at ATC 714)**

| <b>1.30pm – 2.30pm: Afternoon session</b>   | <b>Chairperson: Prof Vivian Tam</b> | <b>ATC 101</b> |
|---|-------------------------------------|----------------|
| Keynote 3 – <i>Behaviour and design of steel and composite structures for the circular construction economy</i> , Prof Brian Uy, The University of Sydney |                                     |                |
| Keynote 4 – <i>Towards smart industry in construction: a pathway of converging research</i> , Prof Xiangyu Wang, Curtin University                        |                                     |                |

**2.30pm – 3.30pm: Forum: Improving university-industry interactions for impactful research**

Chairperson: Prof Jay Sanjayan, Swinburne University of Technology

Panel members: (In alphabetical order)

- Mr Chris Buntine, Aurecon
- Prof Saman Fernando, Swinburne University of Technology and Ajax Engineered Fasteners
- Mr James Gardiner, Laing O'Rourke
- Prof Kerry London, Western Sydney University
- Prof Vivian Tam, Western Sydney University
- Prof Brian Uy, University of Sydney
- Prof Xiangyu Wang, Curtin University

**3.30pm – 4.00pm: Afternoon tea, ATC Building Foyer**

| <b>4.00pm – 5.30pm: Afternoon session</b>   |   |   |  |
|---|---|---|--|
| <b>Session 1</b><br><b>Sustainable Construction and Green Buildings</b><br><b>ATC 101</b><br><b>Chairperson: Awuzie Bankole</b>                             | <b>Session 2</b><br><b>Real Estate Finance and Economics</b><br><b>EN303</b><br><b>Chairperson: Xinhai Lu</b>           | <b>Session 3</b><br><b>Time, Cost and Quality Management in Construction</b><br><b>EN304</b><br><b>Chairperson: Abdul Majeed Mahamadu</b> | <b>Session 4</b><br><b>Risk Management in Construction</b><br><b>EN307</b><br><b>Chairperson: Guijun Li</b>                |
| <b>Invited presentation</b><br>Demystifying the Socio-technical Context of Deploying Distributed PV Systems within the Building Industry<br>by Rebecca Yang | Vertical Integration and Goodwill: The Case of Real Estate Companies<br>by Xiangrui Gong                                | <b>Invited presentation</b><br>Case Based Insights to the Rework Costs of Residential Buildings ----- A China Perspective by Gui Ye       | Risk factors for alliance infrastructure construction projects: A study in New Zealand by Alice Yan Chang-Richards         |
| Evaluation of Green Production in Building Materials Enterprises by Liyin Shen  | Factors Affecting Informal Housing Price Discounts at City Level in China<br>by Lu Shen                                 | An overview of multi-project scheduling problems in India with resource constrained and unconstrained settings<br>by K Marimuthu          | Managing Construction Risks with Equitable Contractual Exclusions by Terence Lam   |
| Life Cycle Cost Analysis on Non-Residential Green Buildings in Singapore<br>by Shengpeng Li   | Housing the Young People: Their housing stress and willing to stay<br>by Yiguan Ma                                      | Exposition of Conceptual Construction Cost: a Review of Modelling Techniques<br>by O.S. Idowu   | Projects Risk Management Using Artificial Neural Networks Based on Lessons Learned<br>By Hossein Derakhshanfar             |
| Motivations for Green building development in Vietnam<br>By Hong-Tran Nguyen  | Lessons and Revelations of Sino - Thai Railway Project<br>by Wenzhu Luo   | Understanding Behavioral Diversity of Onsite Employees in International Projects, Integrated Simulation Approach by Wnchi Shou            | An analysis framework of risk interactions in international construction projects: A Bayesian network approach by Peng Yan |
| Driver and challenges facing leadership in adopting sustainability in the built environment: a developer's perspective<br>By Xiaoling Zhang                 | Preliminary theoretical research for optimal listing price strategy in expected upward housing market<br>by Jianping Gu | An Investigation on Determinants of Labour Absenteeism in Indian Construction Industry<br>by Ayesha Abubacker                             | Critical Risk Identification in One Belt-One Road Highway Project in Serbia By Jelena M Andric                             |
| Properties of Carbon-Conditioned Recycled Aggregate by Anthony Butera   | The Impact of Financial Factors on Commercial Housing's price—An Empirical Study based on VAR Model By Yang Donglang    | Impact of Crew Composition on Productivity and Unit Labour Cost in Construction Projects – A Case Study by Mayank Gupta                   | Critical Risk Factors for Transnational Public-Private Partnership Projects: A Literature Review by Yao Yu                 |

**7.00 – 10.30pm: Conference Dinner, Guest speaker: Prof Hussein Dia, Chairperson of Department of Civil and Construction Engineering, Swinburne University of Technology**

Venue: [Taxi Riverside](#), Federation Square, Corner Swanston Street and Flinders Street, Melbourne (CBD)

**Day 3: Wednesday 22 November 2017**

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|---|---|----------------|
| <b>8.30am – 9.30am Morning session</b>  | <b>Chairperson: Prof Sherif Mohamed</b> | <b>ATC 101</b> |
| Keynote 5 – <i>Effectiveness of productivity improvement strategies in boosting overall project performance</i> , Prof Florence Y.Y. Ling, National University of Singapore |   |                |
| Keynote 6 – <i>Change of Labor Cost and Innovation of Technology Redefine the Construction: evidence from China and Australia</i> , Prof Guiwen Liu, Chongqing University   |   |                |

| <b>9.30am – 10.45am: Morning Session</b>  |  |  |  |
|---|--|--|--|
| <b>Session 1</b><br><b>Urbanisation</b><br><b>ATC 101</b><br><b>Chairperson: Yingnan Yang</b>                           | <b>Session 2</b><br><b>Sustainable Construction and Green Buildings, EN303</b><br><b>Chairperson: Jian Zuo</b>   | <b>Session 3</b><br><b>Occupational Health and Safety in Construction, EN304</b><br><b>Chairperson: John Smallwood</b>                     | <b>Session 4</b><br><b>Real Estate Finance and Economics, EN307</b><br><b>Chairperson: Ping Lyu</b>  |
| <b>Invited presentation</b><br>Modular approach for processing experience in sustainable urbanization by Xiaoling Zhang | <b>Invited presentation</b><br>Coupling analysis on the coordination between socio-economy and carbon emission: case study of Chongqing, China by Liyin Shen | Opportunities for Improving Construction Health and Safety Using Geotechnical Innovations by Chathuri Gunarathna                           | <b>Invited presentation</b><br>Exploring the Causes of the Policy Failure of China's Real Estate Regulation Policy from the Perspective of the Inner Problems of the Policy by Donglang Yang |
| Changes of Industrial Structure and Its Regional Difference in Zhejiang Province by Yanfang Wu                          | Life-cycle costing as a tool for selecting optimum solutions for insulated floors in Australia by Chethana Illankoon   | Organisational Attributes that Determine Design for Occupational Safety and Health Capability by Abdul-Majeed Mahamadu                     | Analysis of the operation relationship between commercial real estate price and macroeconomic —Take Chongqing city as an example by Yuqing Gan   |
| More Inclusive Approaches to Smart Cities: No one is left behind by Ruiqu Ma  | Sustainable construction waste management in Adelaide by Rita Yi man Li  | Exploring health and well-being of workers on a large multinational construction project by David Oswald                                   | Dual Process of Consumption and Investment Motives in Residential Market Indonesia by Njo Anastasia  |
| Public Housing as Method: Upgrading the Urbanisation Model of Chongqing through a Mega Urban Project by Weijie Hu       | A preliminary framework for site planning and site design in green buildings by Xiaosen Huo  | Understanding of Safety Investment and Financial Loss in construction industry – A Literature Review by K.C. Ying                          | Towards an Ex-post Evaluation of PPP Projects from the Perspective of Multiple Stakeholders by Jose Oliveros   |
| Acculturation of Project-Induced Immigrants: A Gender Difference Perspective by Yang Wang                               | Theme Based Comparison of International Green Neighbourhood Assessment Systems by Hoda Karimipour  | Labour Productivity Improvements in Construction Projects: Factors Related to Site Amenities and Labour Welfare Provisions by Mayank Gupta | Study of Global Waste Quantification Models by Muhammad Akram Akhund   |

**10.45am to 11.15am: Morning tea, ATC Building Foyer**

| <b>11.15am – 12.30pm: Morning Session</b>   |  |   |   |
|---|--|---|---|
| <b>Session 1</b><br><b>Urban Planning design and development</b><br><b>ATC 101</b><br><b>Chairperson: Rita Yi Man Li</b>                                  | <b>Session 2</b><br><b>Building Heritage, land use and industrialisation</b><br><b>EN303</b><br><b>Chairperson: Zhigang Wu</b> | <b>Session 3</b><br><b>Building Prefabrication and modular construction</b><br><b>EN304</b><br><b>Chairperson: Zhu Ding</b> | <b>Session 4</b><br><b>Construction Automation</b><br><b>EN307</b><br><b>Chairperson: Chia Fah Choy</b>                 |
| <b>Invited presentation</b><br>The Synergy between New Urbanization and Land Use Efficiency— A Case Study of Dingzhou City in Hebei Province by Guijun Li | <b>Invited presentation</b><br>A Review of Underused Urban Land Redevelopment in China by Jian Lin                             | Industrial ecosystem evolution of off-site construction industry: based on a multiple case study by Chengke Wu              | A Framework of Enhanced Location Based Management System Using Simulation Models by Jun Wang                            |
| Analysis on Coupling Relationship of Financing Capability and the Competitiveness of Real Estate Enterprises in China by Na Liu                           | Research on the Relationship between Building Industrialization and Labor Productivity of China by TengFei Huo                 | Greenhouse Gas Emission Monitoring of Prefabricated Component Manufacturing: A Cyber-Physical System Approach by Xingyu Tao | Investigating project performance measurements based on the complexity level of IT-enabled projects by Sylvia Odusanya  |
| What's the "New CBD" strategy in urban renewal? based on Blue Ocean Strategy analysis by Lizhen Wei   | DEA-based Efficiency Analysis to Industrial Land Use: A Case Study of Chinese Development Zones by Jiaming Shan                | Trends in Housing Offsite Manufacturing Supply Chain Management (HOSCM) Research by Rehan Masood                            | Developing Lean Management Framework for Building Information Modelling (BIM)-based Construction Project by Sagar Gupta |
| HSR-based nodal zones (HNZs) in networked cities: A case of China By Jinding Xing   | Analysis of Interest conflicts between the Stakeholders about  | Carbon emission analysis during the life-cycle of prefabricated buildings: a case   | Comparative Study of Crew Performance Measurement   |

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|  | Architectural Heritage Protection by Liu Guo  | study in Shenzhen, China by Yu Gao  | Methods: Case Study of Steel Fixers by Sungkon Moon   |
| Exploring The Planning Orientation of Different Types of Characteristic Towns: Based on The Perspective of Population, Industry and Land Integration by Yun Hang | Case Studies on Evaluation of Sustainable development of Small Towns in Southwest China By Wei Xiaoxuan | On-site Productivity in Construction Projects: Key Constraints and Improvement Measures by Abid Hasan | Technical Review of Automated Monitoring System for Concrete Curing by Angat Pal Singh Bhatia |

**12.30pm – 1.15pm: Lunch, ATC Building Foyer**

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|--|-----------------------------------|----------------|
| <b>1.15pm to 2.15pm</b>  | <b>Chairperson: Prof Emad Gad</b> | <b>ATC 101</b> |
| Keynote 7 - <i>System dialectics of low or zero carbon building</i> , A/Prof. Wei Pan, The University of Hong Kong |                                   |                |
| Keynote 8 - <i>Emerging Trajectories in Construction 3D Printing</i> , Dr James Gardiner, Laing O'Rourke           |                                   |                |

**2.15pm – 2.45pm: Journal Editors' Publication Forum**

Chairperson: Prof KW Chau, University of Hong Kong; *International Journal of Construction Management*

Panel members: (In alphabetical order)

- Prof Emad Gad, Swinburne University of Technology , *Australia Journal of Structural Engineering*
- A/Prof Rebecca Gravina, RMIT University, *Australia Journal of Civil Engineering*
- Prof Sherif Mohamed, Griffith University, *Safety Science*
- Prof Liyin Shen, Chongqing University, *International Journal of Construction Management*
- Mr Bingyuan Yi, Chief Editor, *Journal of Construction Economics (in Chinese)*,
- A/Prof Xiaoling Zhang, City University of Hong Kong, *Journal of Cleaner Production*

| <b>2.45pm – 3.45pm: Afternoon session</b>  |   |   |   |
|--|---|---|---|
| <b>Session 1</b><br><b>Property Rights Analysis of Land and Housing Institutions</b><br><b>ATC 101</b><br><b>Chairperson: Hao Wu</b>             | <b>Session 2</b><br><b>Building Energy Efficiency</b><br><b>EN303</b><br><b>Chairperson: Gui Ye</b>   | <b>Session 3</b><br><b>Occupational Health and Safety in Construction</b><br><b>EN304</b><br><b>Chairperson: Yingbin Feng</b>           | <b>Session 4</b><br><b>Urban Planning design and development</b><br><b>EN307</b><br><b>Chairperson: Tayyab Maqsood</b>  |
| <b>Invited presentation</b><br>Land Finance and Urban Diversity: the Empirical Evidence from 289 Prefecture - level Cities in China by Xinhai Lu | Design Factors Influencing Energy Performance Gap in Building Retrofit Projects by Dipika Wagle   | Construction risk tolerance: workers versus site-managers by Pengpeng Li  | Research on Policy Path of Culture-led regeneration: Based on government Roles analysis by Dan Luo                      |
| The Impact of Capital Structure on Financing Efficiency of Infrastructure PPP Projects by Yuwei Luo  | Risk Identification and Assessment for Construction and Commissioning Stages of Building Energy Retrofit Projects by Van Manh Phung               | Social Capital, Safety Cognitive and Construction Safety Behavior by Xiuyu Wu   | Using Mobile Phone Data for Social Infrastructure Planning by Hui Tang  |
| Transfer Success Criteria for Public-Private Partnership Infrastructure Projects by Fengyu Bao   | Research on stage characteristics of low carbon city by Ya Wu   | Gender Equality in Singapore's Construction Industry by Zhe Zhang   | The Study of the Economic Balance in Urban Village Transformation in China under the Guidance of Policy by Mengtian Cao |
| Measuring the relationship between transport infrastructure and regional economic growth: the case of Chongqing, by Yang Chen                    | A Review on International Ecological Legislations on Life-Cycle Energy Consumption, Greenhouse-Gas Emissions And Costing Assessment by Cuong Tran | Impact of Occupational Health and Safety Legislation on Performance Improvement in the Nigerian Construction Industry by John Smallwood | Critical Factors Affecting the Implementation of Urban Renewal Projects: Case Study in Shenzhen By Haiyang He           |

**3.45pm – 4.15pm: Afternoon tea, ATC Building Foyer**

| <b>4.15pm-5.30pm: Afternoon session</b>  |  |  |  |
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| <b>Session 1</b><br><b>Construction Materials</b><br><b>ATC 101</b><br><b>Chairperson: Terence Lam</b>                       | <b>Session 2</b><br><b>Construction engineering</b><br><b>EN303</b><br><b>Chairperson: Sherif Mostafa</b>    | <b>Session 3</b><br><b>Time, cost and quality management in construction</b><br><b>EN304</b><br><b>Chairperson: Alice Yang</b> | <b>Session 4</b><br><b>Occupational Health and Safety in Construction</b><br><b>EN307</b><br><b>Chairperson: Carol Hon</b> |
| <b>Invited presentation</b><br>Properties of improved magnesium phosphate cement and its Carbon Fiber Composites By Zhu Ding | An Investigation into the Water Infrastructure PPP Failures in Europe: A Case Study Approach by Salman Tariq | Key carbon emission sectors in China: application of input-output analysis by Yingli Lou                                       | Investigating Safety Communication of Migrant Workers in Construction Industry by Sainan Lyu                               |

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| Influence of Type of Activator on Fracture Properties of Geopolymer By Behzad Nematollahi                              | Study on the Influence of Urban Rail Transit on Residential Rental Based on Hedonic Model -Taking Hangzhou Metro Line 1 as an Example by Renhan Xu | Trend of the research on EPC/DB projects, inside and outside China by Rong Zhang   | Safety training in construction: a review of training methods and effectiveness by Yingbin Feng   |
| Thermal and Chemical Degradation of Portland Cement Concrete in the Military Airbase By Sukanta Kumer Shill            | Construction Productivity: The Case of Malaysia By Fah Choy Chia   | System reliability optimization research for the construction project quality-cost tradeoff via modified Genetic Algorithm By Tingyan Gu | Asymmetric Viewpoints on Solutions Which Enhance Construction Safety: A Social Network Analysis Approach by Rita Yi Man Li                    |
| Selection of Most Suitable Pipe Material for Water Supply Projects by Ashish Sood                                      | Achieving Sustainable Construction in South Africa Through Digitization: An Exploratory Study by Dr Bankole  | Addressing the human cost in sustainability rating tools by John Smallwood   | Real Time Locating System for Construction Safety Management: An explanatory investigation in the Australia construction industry by Nini Xia |
| Smart Cities: An analysis of Accepted Behaviors for Implementing BMS Technology in Pakistan Using TAM by Ahsen Maqsoom | Waste management practices in Australia: Comparison of Strategies by Ruchini Jayasinghe  | Causes of Delays in Iranian Gas and Combined Cycle Power Plant Projects by Hossein Derakhshanfar   | Causes and impact of work related stress amongst construction health and safety managers by Abdul-Majeed Mahamadu                             |
| Labor Productivity in Construction Industry: Impact of External Psychosocial Stressors by Ahsen Maqsoom                |  |  |   |

**5.30pm – 6.00pm: Closing ceremony and handover to CRIOCM 2018, Chairperson: Prof Liyin Shen, Jay Sanjayan and Patrick Zou,**

**Day 4: Thursday 23 November 2017**

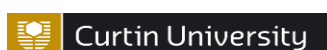
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|-------------------------|---|
| <b>9.00am – 10.00am</b> | Technical Tour to Swinburne Smart Structure Lab               |
| <b>10am – 11:30am</b>   | Discussion on Research Methodology and Morning Tea in ATC 714 |

**Conference Organisers:** Swinburne University of Technology; Chinese Research Institute of Construction Management (CRIOCM)

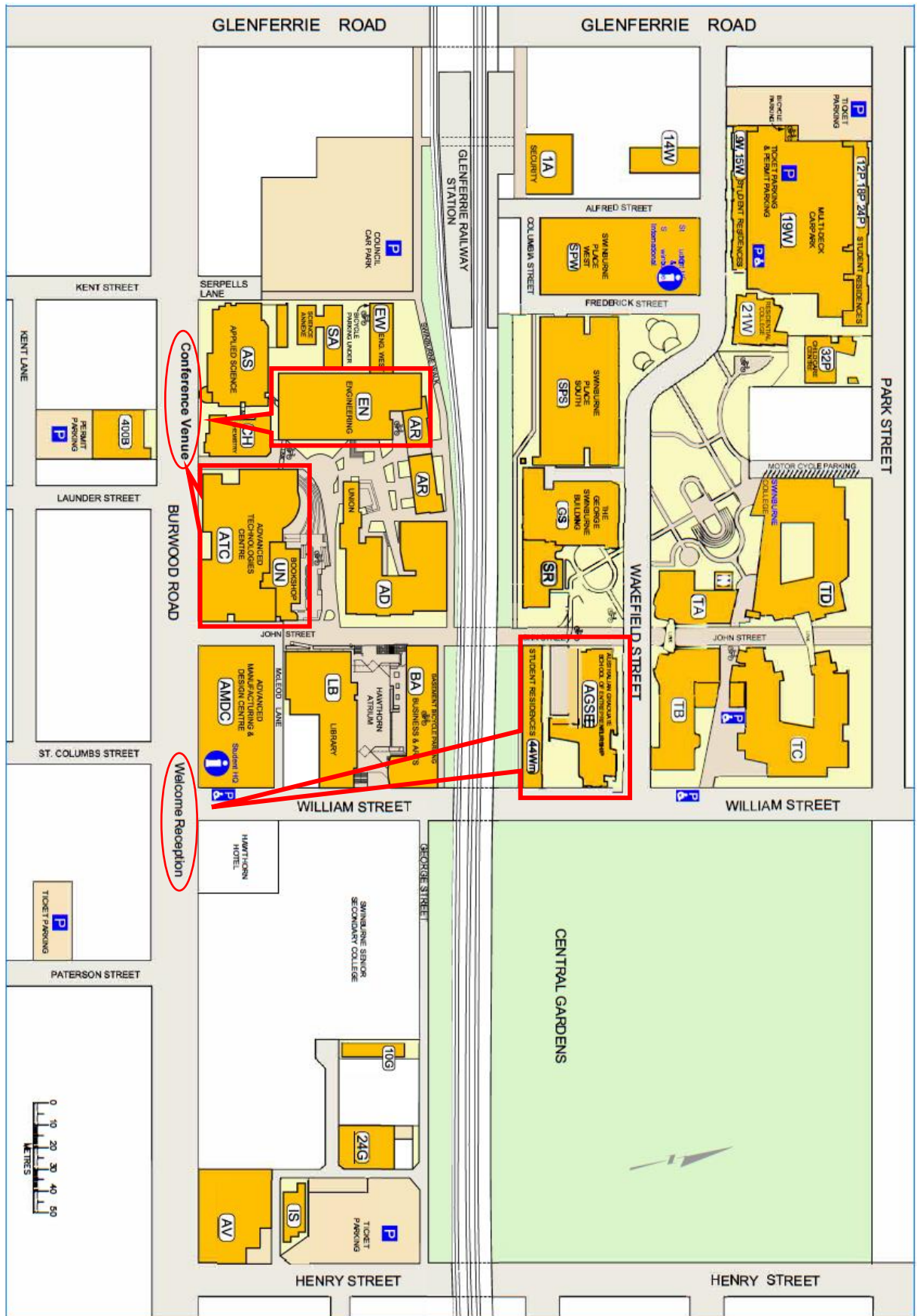
**Conference Co-Organisers:** The University of Hong Kong; Peking University; Tsinghua University; Zhejiang University; Chongqing University; Shenzhen University; Tianjin Chengjian University



**Key participating originations:** Victorian Government Department of Economic Development, Jobs, Transport and Resources, Aurecon, the University of Sydney, Curtin University, Western Sydney University, RMIT University, Griffith University, Queensland University of Technology, National University of Singapore, Lang O'Rourke, ETH Zurich, Ajax Engineered Fasteners







Map of Swinburne University of Technology, Hawthorn Campus