

A tall, modern glass skyscraper with a grid-like facade, reflecting the sky and clouds. The words "VICTORIA UNIVERSITY" are visible on the building's facade. The sky is a vibrant blue with scattered white clouds.

47th Australasian Universities Building Education Association Conference

Program

24 - 27 November 2024

**Building for a Sustainable Future: Innovations,
Challenges, and Collaboration**

VU City Tower
370 Little Lonsdale St, Melbourne VIC 3000

vu.edu.au/AUBEA-2024

Acknowledgement of country

Victoria University (VU) acknowledges the Elders, families and forebearers of the Boonwurrung, Woiewurrung (Wurundjeri) and Wathaurung (Wadawurrung) who are the custodians of University land and have been for many centuries.

We acknowledge that the land on which we stand is the place of age-old ceremonies of celebration, initiation and renewal, and that the Kulin people's living culture had, and has, a unique role in the life of this region. VU supports the aim of Reconciliation Australia to build better relationships between the wider Australian community and Aboriginal and Torres Strait Islander peoples for the benefit of all Australians.



Artist: Paola Balla, Moondani Balluk, 2017

Welcome Message from the Conference Chair

Welcome to AUBEA2024!

It is an absolute pleasure to welcome you to Melbourne and the 47th AUBEA conference, hosted by Victoria University at our City Tower campus. This year's conference is truly an international gathering, with delegates joining us from across the globe, bringing together diverse perspectives and expertise that enrich our field.

AUBEA2024 focuses on the theme "Building for a Sustainable Future: Innovations, Challenges, and Collaboration." Over the next few days, we'll explore critical areas that shape the future of the built environment, including circular economy practices, digital innovation in construction, advancements in sustainable construction and leadership and gender equity. Our program also highlights Victoria University's unique educational model and its approach to innovative, industry-integrated learning.

Melbourne, renowned for its architectural diversity and cultural vibrancy, offers an ideal backdrop for these discussions. In addition to our sessions, we have organised technical tours that showcase groundbreaking projects, from the West Gate Tunnel to our own Structural Fire Testing Facility.

I would like to express my heartfelt gratitude to everyone who has contributed to making AUBEA2024 possible: Victoria University, AUBEA Council, our sponsors, our conference co-chairs, organising committee, keynote presenters, panel members, speakers, and each of you as attendees. Your commitment to advancing building education and practice is what drives the success of our conference and shapes the future of our industry.

Thank you for being part of this important event. I encourage you to make the most of every session, panel, and conversation, as we work together toward a more sustainable and resilient future.

Warm regards,

Professor Zora Vrcelj
Conference Chair, AUBEA2024



AUBEA2024

Conference Program

24 - 27 November 2024

Day 0	Sunday 24 November 2024
5:30pm – 6pm	Arrival and Early Registration <i>Foyer, VU City Tower</i>
6pm – 7:30pm	Welcome Reception <i>VU City Tower</i>
Day 1	Monday 25 November 2024
8am – 9am	Registration <i>Level 25, VU City Tower</i>
9am – 9:45am	Welcome and Opening Ceremony <i>Level 25, VU City Tower</i>
9:45am – 10:45am	Keynote Address 1: Stephen Sammartino Futurist & Keynote Speaker <i>Level 25, VU City Tower</i>
10:45am – 11am	Tea & Coffee Break <i>Level 25, VU City Tower</i>
11am – 11:50am	Keynote Address 2 Sponsored by Transurban: Jorge Chapa Green Building Council of Australia <i>Level 25, VU City Tower</i>
11:50am – 12pm	Australian Institute of Quantity Surveying (AIQS) <i>Level 25, VU City Tower</i>
12pm – 12:45pm	Lunch <i>Level 10, VU City Tower</i>
12:45pm – 1:45pm	Plenary Panel Session 1: Circular Economy Research Network Asia- Pacific (CERN APac): Building Skills for a Circular Economy <i>Level 25, VU City Tower</i>
1:50pm – 3:20pm	Parallel Session 1 <i>Level 11 and 12, VU City Tower</i>
1:50pm – 3:20pm	AUBEA Council Meeting <i>Room: Level 03 Rm 0307</i>
3:20pm – 3:40pm	Tea & coffee break <i>Level 25, VU City Tower</i>
3:40pm – 5pm	Plenary Panel Session 2: Performance-based legislation: facilitating innovation or negotiated compliance? <i>Level 25, VU City Tower</i>
3:20pm – 5:10pm	Online Session <i>Zoom link</i>
6:30pm – 9pm	Conference Dinner <i>Zinc at Federation Square, Cnr Princes Walk &, Russell St Ext, VIC 3000</i>

Day 2	Tuesday 26 November 2024
08:30 – ongoing	Registration <i>Level 25, VU City Tower</i>
9am – 10am	Keynote Address 3: Clare Shiell, <i>Plenary Group</i> <i>Level 25, VU City Tower</i>
10am – 11am	Plenary Panel Session 3: Innovation in Built Environment Education: The VU Block Model® <i>Level 25, VU City Tower</i>
11am – 11:15am	Tea & Coffee Break <i>Level 10, VU City Tower</i>
11:15am – 12:15am	Parallel Session 02 <i>Level 11 and 12, VU City Tower</i>
12:15am – 1pm	Lunch <i>Level 10, VU City Tower</i>
1pm – 2:30pm	Parallel Session 03 <i>Level 11 and 12, VU City Tower</i>
1:45pm - 2:30pm	Workshop: Applications of Generative AI in Construction Project Management <i>Level 1114, VU City Tower</i>
2:30pm – 2:45pm	Tea & coffee break <i>Level 10, VU City Tower</i>
2:45pm – 4:15pm	Parallel Session 04 <i>Level 11 and 12, VU City Tower</i>
4:15pm – 5pm	Closing Ceremony <i>Venue: Level 25, VU City Tower</i>

Day 3	Wednesday 27 November 2024
8:15am – 3pm	Technical Bus Tour*: West Gate Tunnel Project and Victoria University Structural Fire Testing Lab with Buffet Lunch <i>Meeting location: VU City Tower</i>
9am – 12pm	Technical Walking Tour: Walking tour, Melbourne CBD award-winning buildings <i>Meeting location: Ground Floor Lobby, 55 Collins St</i>

*To register please visit the conference website

Day 1: Parallel Session 1

Monday, 25 November 2024, 1:50pm – 3:20pm

Themes:	Stream 1: Leadership & Gender Equity in Construction	Stream 2: Transforming Construction through Circular Economy	Stream 3: Advancing Risk and Quality Management in Global Construction	Stream 4: Digital Innovations in Construction Education + CIB Doctoral School	Stream 5: Innovative Approaches in Construction Education and Safety	Stream 6: CIB Doctoral School
Session Chair:	A/Prof Sepani Senaratne <i>Western Sydney University</i>	Dr Paulo Vaz-Serra <i>The University of Melbourne</i>	Dr Ruwini Edirisinghe <i>RMIT University</i>	Dr Brendan Kirkland <i>Western Sydney University</i>	Dr Chandana Siriwardena <i>Massey University</i>	Panel Members: Dr Mostafa Jelodar <i>Massey University</i> Dr Marcus Jefferies <i>University of Newcastle</i> Dr Samudaya Nanayakkara <i>Western Sydney University</i>
Session Co-chair:	Dr Mengbi Li <i>Victoria University</i>	A/Prof Paul Joseph <i>Victoria University</i>	Dr Melissa Chan <i>Victoria University</i>	Dr Le Li <i>Victoria University</i>	Dr Kumudu Weththasinghe <i>Victoria University</i>	Dr Nima Izadyar <i>Victoria University</i>
Room:	Level 12, Rm 1211	Level 12, Rm 1212	Level 12, Rm 1213	Level 11, Rm 1114	Level 11, Rm 1111	Level 11, Rm 1110
1:50pm – 2:05pm	ID 4: Women Balancing Identities: Navigating Leadership and Gender in the Built Environment <i>Dr Jessica Siva University of New Castle</i>	ID 25: Critical Success Factors for Synergistic Development of Circularity and Resilience in Energy Infrastructures <i>Hongyu Jin The University of Auckland, New Zealand</i>	ID 145: Risk Management for Renewable Energy Project Development: Insights and Challenges in the Indonesian Context <i>Karmila Seran Massey University, New Zealand</i>	ID 250: Promoting Technologies to Improve Construction Productivity: A Perspective of First-Tier New Zealand Construction Companies <i>Ala Aladwan Massey University, New Zealand</i>	ID 94: Integrating Engineering Management Principles to Enhance Farm Safety: A Collaborative Experiential Learning Approach <i>Nilupa Herath The University of Melbourne</i>	ID 260: Improving Project Management Performance by Implementing Systems Thinking and System Dynamics Modelling in Managing Risk and Stakeholders in the Australian Construction Industry <i>Zahra Majd Bond University</i>
2:05pm – 2:20pm	ID 73: Advancing Gender Inclusion in Construction 4.0: Insights from Prefabrication Practices <i>Huey Wen Lim The University of Melbourne</i>	ID 84: Towards Circular Construction: A Review of Critical Success Factors <i>Alan Murray University of Technology Sydney</i>	ID 34: A Conceptual Framework for Lean Integrated Life Cycle Risk Management for Sri Lankan Large Contractors <i>Lakkhana Perera Queensland University of Technology</i>	ID 212: Design and Evaluation of IATC Microcredential Building Information Modelling (BIM) in Construction <i>Wei Zhou Western Sydney University</i>	ID 263: COVID-19 New Normal: Planning for the Future <i>Hing-Wah Chau Victoria University</i>	
2:20pm – 2:35pm	ID 3: Gender-Fair Advertising in New Zealand: How Inclusive is the Construction Industry? <i>Rashika Sharma Unitec institute of Technology, New Zealand</i>	ID 104: Barriers to Circular Economy Adoption in Construction of Residential Projects: The Case of Hong Kong Transitional Housing <i>Michael Adabre The Hong Kong Polytechnic University</i>	ID 259: Managing Project Quality Risks Using Design and Construction with Novation <i>Guillermo Aranda-Mena RMIT University</i>	ID 240: Integration of BIM with the Last Planner System for Construction Planning and Scheduling <i>Sajani Jayasuriya RMIT University</i>	ID 283: Enhancing Gender Equity in Construction Education through Online Real-Time Learning and Teaching, <i>Shuo Chen Victoria University</i>	ID 279: The role of demonstration projects in facilitating the transition towards sustainable construction <i>Sadaf Dalirazar RMIT University</i>
2:35pm – 2:50pm	ID 158: Is it 'Really' Corrosive Behaviour? <i>Ken Farnes RMIT University</i>	ID 175: Understanding the Circular Economy Implications of Net Zero Policies in the Built Environment <i>Akvan Gajanayake RMIT University</i>	ID 82: Identifying Primary Factors Behind Construction Project Failure: A Global Perspective with New Zealand Case Study <i>Maryam Tagharobi Massey University, New Zealand</i>	ID 16: BIM for Safety Management: Current Implementation and Challenge in Indonesian Construction Industry <i>Nabila Satwikawati PT. PP (Persero) Tbk, Jakarta, Indonesia</i>	ID 265: The Effectiveness of Mathematics Modules for Online Construction Management Students: A Scoping Review <i>John Hicks University of South Australia</i>	
2:50pm – 3:05pm	ID 192: Closing the Gender Gap in Construction Project Leadership <i>Fatima Afzal Central Queensland University</i>	ID 81: The Impact of Timber Offsite Construction on Global Warming <i>Sanaz Nesarnobari Massey University, New Zealand</i>	ID 229: An Investigation into the Causes of, and Potential Remedies for, Insolvency in the South Australian Construction Industry <i>Jeremy Coggins University of South Australia</i>	ID 19: Integrating Building Information Modelling (BIM) into Construction Project Management Education in Australia (CIB Doctoral School) <i>Xavier Papuraj Victoria University CIB Doctoral School Panel members: Dr Akvan Gajanayake RMIT University A/Prof Elmira Jamei Victoria University</i>	ID 268: Cross-disciplinary Collaborative Problem-based Learning on Smart Home Design and Implementation, <i>Hing-Wah Chau Victoria University</i>	ID 256: Enhancing Construction Safety Through the Integration of Lean Construction and BIM <i>Osman Hulusi Turkyilmaz RMIT University</i>
3:05pm – 3:20pm	ID 143: Apprenticeships in Construction: Barriers for Completion of Training <i>Anthony Mills Deakin University</i>	ID 95: Towards a Circular Construction - Stakeholder Insights on C&D Waste Management in Australia <i>Noushin Islam Victoria University</i>	ID 97: PESTEL Analysis of Problems Associated with Adoption of Offsite Construction: A Systematic Literature Review <i>Kola Olayiwola Western Sydney University</i>		ID 182: Prototyping a Serious Game for Education on Mold and Indoor Air Quality in Dwellings <i>Abdollah Baghaei Daemei Massey University, New Zealand</i>	

Day 1: Online Session

Monday, 25 November 2024, 3:20pm - 5:10pm

Themes:	Stream 1: Innovations in Advanced Construction: BIM, Prefabrication, and Sustainable Practices	Stream 2: Sustainable and Net-Zero Measures towards Decarbonization in Built Environment	Stream 3: Addressing Industry Dynamics, Legal Frameworks, and Cultural Contexts in Architecture and Construction
Session Chair:	A/Prof Niluka Domingo <i>Massey University, New Zealand</i>	A/Prof Ehsan Yaghoubi <i>Victoria University</i>	A/Prof Elmira Jamei <i>Victoria University</i>
Session Co-chair:	Dr Hing-Wah Chau <i>Victoria University</i>	Dr Mengbi Li <i>Victoria University</i>	Dr Amir Ghapanchi <i>Victoria University</i>
Zoom link:	https://victoriauniversity.zoom.us/j/88670973266?pwd=Jwb6Ha-Paehsgf4nvCILQkvHWljcMi7.1	https://victoriauniversity.zoom.us/j/84078554851?pwd=3lsZ6Pf5S-dclFo0DPVxg0AAsx6ChWj.1	https://victoriauniversity.zoom.us/j/89372188984?pwd=LDa60vx-3M8CyVtsGmM81CZP6jb8iTQ.1
3:20pm – 3:55pm	ID 67: Effective BIM Training Delivery Approach through PESTLE Framework Samuel Adekunle <i>University of Johannesburg, South Africa</i>	ID 31: Tales of the unexpected- the embodied carbon of building services systems in housing Roger Birchmore <i>Unitec institute of Technology, New Zealand</i>	ID 64: Examining Employee Attrition Factors in the Indian Construction Industry: Insights from Project Engineers' Perspectives Karmila Seran <i>Massey University, New Zealand</i>
3:55pm – 4:10pm	ID 96: Comparative Study of Offsite Construction in New Zealand and Singapore through PESTLE Framework Monica Srivastava <i>Massey University, New Zealand</i>	ID 32: Stakeholders' Behaviour Towards Achieving Net Zero Carbon Building - A Review Justina Falana <i>Western Sydney University</i>	ID 150: Readability and comprehensibility of payment clause in FIDIC Red Book 2017 and NZS 3910:2023 Juwita Radzi <i>Massey University, New Zealand</i>
4:10pm – 4:25pm	ID 50: Machine Learning Based Real Time Noise Estimation for Safety Monitoring in Construction Sites Thushan Maduranga <i>RMIT University</i>	ID 226: Assessing Zero-Carbon Measures in New Zealand's Building Sector: Insights from Industry Professionals Vishnupriya Vishnupriya <i>Massey University, New Zealand</i>	ID 222: An Architectural Response to African Spiritual Healing Practises: Towards A Spiritual Healing Centre in Ulundi, South Africa Hlengiwe Ngubane <i>University of KwaZulu-Natal, South Africa</i>
4:25pm – 4:40pm	ID 14: Smart and advanced manufacturing technologies and artificial intelligence for sustainability enhancement of prefabricated construction: A scientometric analysis Janappriya Jayawardena <i>RMIT University</i>	ID 10: Quantifying the Energy Impact of Resilient Ventilation on Existing Office Buildings Darren Kelly <i>Engineering Institute of Technology, West Perth</i>	ID 220: Discourse on Cutting Edge Innovative Research at Universities Through Placemaking Majahmahle Mthethwa <i>Durban University of Technology, South Africa</i>
4:40pm – 4:55pm	ID 91: Analysis of Prefabrications Contribution to The Liquidation of New Zealand Construction Industry Sadegh Aliakbarlou <i>Unitec institute of Technology, New Zealand</i>	ID 154: What does Decarbonising of Buildings mean to Construction Cost Planners? Tim O'Leary <i>The University of Melbourne</i>	ID 261: Emotional Intelligence as a Predictor of Job Satisfaction Level in the Construction Industry Adedayo Ogungbile <i>Hong Kong Metropolitan University</i>
4:55pm – 5:10pm		ID 246: Promoting environmental sustainability performance of tensile membrane structures: Expert interviews Sarah Elattar <i>University of Canberra</i>	

Day 2: Parallel Session 2

Tuesday, 26 November 2024, 11:15am – 12:15pm

Themes:	Stream 1: Technological and Strategic Innovations in Disaster Resilience	Stream 2: Innovative Practices in Sustainable Construction	Stream 3: Data-Driven Infrastructure and Procurement Strategies	Stream 4: Regulatory Perspectives and Challenges in the Australian Construction Industry	Stream 5: Workforce Development and Well-Being in Construction	Stream 6: Enhancing Productivity and Competitiveness in Construction
Session Chair:	Dr Akvan Gajanayake <i>RMIT University</i>	Prof Imriyas Kamardeen <i>Deakin University</i>	Prof Valerie Francis <i>The University of Melbourne</i>	Dr Darryl O'Brien <i>Victoria University</i>	Dr Nilupa Herath <i>The University of Melbourne</i>	Dr Jessica Siva <i>The University of Newcastle</i>
Session Co-chair:	Ms Shiran Geng <i>Victoria University</i>	A/Prof Paul Joseph <i>Victoria University</i>	Dr Kumudu Weththasinghe <i>Victoria University</i>	Dr Nima Izadyar <i>Victoria University</i>	Dr Melissa Chan <i>Victoria University</i>	Dr Le Li <i>Victoria University</i>
Room:	Level 12, Rm 1211	Level 12, Rm 1212	Level 12, Rm 1213	Level 11, Rm 1110	Level 11, Rm 1111	Level 11, Rm 1114
11:15am – 11:30am	ID 156: Shelter After Disasters in Australia Iftekhar Ahmed <i>University of Newcastle</i>	ID 205: Predictive Modelling for Road Maintenance: A Data-Driven Machine Learning Approach Using Gradient Boosting Regression Tirth Patel <i>University of Canterbury, New Zealand</i>	ID 122: Automated Information Extraction and Graph Representation to Support Tunnel Infrastructure Management Yafei Sun <i>The University of New South Wales</i>	ID 29: A Critical Examination of Mandatory Building Inspections: Perspectives from Australian Contractors Paulo Vaz-Serra <i>The University of Melbourne</i>	ID 88: Building Consent Datasets as Predictor for Construction Workforce Forecasts Diocel Harold Aquino <i>Massey University, New Zealand</i>	ID 7: Unlocking Hidden Potential: Exploring Tacit Knowledge Capture for Enhanced Productivity in Construction Firms Patrick Fong <i>Griffith University</i>
11:30am – 11:45am	ID 133: Bridging Gaps in Early Warning Systems: A Web-based Solution for Enhanced Emergency Response in Sri Lanka Chandana Siriwardana <i>Massey University, New Zealand</i>	ID 264: Barriers to Uptake of Low-Carbon Concrete in Construction: Insights from New Zealand An Le <i>Massey University, New Zealand</i>	ID 195: Identification of Data-Driven Methods for Risk Assessment in Public-Private Partnership Projects Fatemeh Khalilnezhady <i>RMIT University</i>	ID 142: Is the Australian National Construction Code sufficient to deliver the net-zero transition? Judy Too <i>The University of Melbourne</i>	ID 11: Addressing Shortage of Building Construction Academics in Papua New Guinea Tertiary Institutions, Jerry Walliah <i>The Papua New Guinea University of Technology</i>	ID 39: Building Regulations: Quality or Compliance Blair Gardiner <i>The University of Melbourne</i>
11:45am – 12pm	ID 89: A review of technologies that improve flood resilience in residential buildings Kasun Gunasekara <i>Western Sydney University</i>	ID 15: Comparative Analysis of PM Emissions in Construction Sites and Surrounding Areas Xingyue Fang <i>University of Adelaide</i>	ID 207: Principal Indicators for Universities Reporting on Sustainable Development Goals Yu Cheng <i>Deakin University</i>	ID 266: Perceptions of Industry Professionals on the National Construction Code 2022 Madhav Nepal <i>Queensland University of Technology</i>	ID 141: Skilling the Australian Workforce for the Net-Zero Transition Judy Too <i>The University of Melbourne</i>	ID 244: Competitiveness of South African Construction Firms in the Business Environment of Other African Countries Matthew Ikuabe <i>University of the Witwatersrand, South Africa</i>
12pm – 12:15pm	ID 183: Key Variables Influencing the Cooling Performance of Urban Parks: A Scoping Review of Internal and External Factors Maryam Norouzi <i>Victoria University</i>	ID 137: Construction and Monitoring of a Road Trial with Asphalt Mixtures Incorporating High Recycled Aggregate Content Ehsan Yaghoubi <i>Victoria University</i>	ID 159: Modeling Personnel' Acceptance of Contractor Selection Technology in Public Procuring Entities Danlami Ebenezer Salla <i>Bayero University Kano</i>	ID 251: Fit for Purpose? Establishing regulatory clarity around disability housing Andrew Martel <i>The University of Melbourne</i>	ID 230: Barriers to Achieving Positive Mental Health Among Professionals in the Construction Industry Samuel Adekunle <i>University of Johannesburg, South Africa</i>	ID 245: Review of Decision-Making Models for Prioritising and Analysing Risk Factors in Construction Projects Faranak Zagia <i>Queensland University of Technology</i>

Day 2: Parallel Session 3

Tuesday, 26 November 2024, 1pm – 2:30pm

Themes:	Stream 1: Innovation and Technology in Sustainable Construction	Stream 2: AI for Sustainable Construction and Project Management	Stream 3: Decarbonising Building Services and Stakeholder Collaboration	Stream 4: Social Responsibility and Sustainable Development in Construction	Stream 5: Enhancing Well-Being and Productivity in Construction	Stream 6: CIB Doctoral School
Session Chair:	Prof Tayyab Maqsood <i>RMIT University</i>	Dr Sajani Jayasuriya <i>RMIT University</i>	Dr Gayani Karunasena <i>Deakin University</i>	Dr Akvan Gajanayake <i>RMIT University</i>	Dr Paulo Vaz-Serra <i>The University of Melbourne</i>	Prof Srinath Perera <i>Western Sydney University</i> Prof Tak Wing Yiu <i>The University of New South Wales</i> Dr Salman Shooshtarain <i>RMIT University</i>
Session Co-chair:	Dr Mengbi Li <i>Victoria University</i>	Dr Le Li <i>Victoria University</i>	Dr Kumudu Weththasinghe <i>Victoria University</i>	Dr Shuo Chen <i>Victoria University</i>	Ms Shiran Geng <i>Victoria University</i>	A/Prof Elmira Jamei <i>Victoria University</i>
Room:	Level 12, Rm 1213	Level 11, Rm 1114	Level 12, Rm 1211	Level 11, Rm 1111	Level 12, Rm 1212	Level 11, Rm 1110
1pm – 1:15pm	ID 243: Deciphering Smart Heritage: Current Technologies and Best Practice Strategies <i>Shiran Geng</i> <i>Victoria University</i>	ID 272: The Integration of Geospatial Artificial Intelligence for Enhancing Built Environment Sustainability <i>Prasad Perera</i> <i>Western Sydney University</i>	ID 267: Applying Lessons from COVID-19's Impact on Office Operations to Occupancy Optimisation Strategies: A New Era of Occupancy Rate Performance <i>Marcus Jefferies</i> <i>University of Newcastle</i>	ID 65: Social Value Evaluation of Construction Sector: Towards a Holistic Evaluation Framework <i>Malsha Gimhani</i> <i>Deakin University</i>	ID 62: Strategies for Improving Work-Life Balance in Small Construction Firms in New Zealand <i>Rashika Sharma</i> <i>Unitec Institute of Technology, New Zealand</i>	ID 234: Evaluating and Maximising the Park Cooling Capacity During Extreme Heat Events: The Role of Urban Form, and Climate Zone <i>Maryam Norouzi</i> <i>Victoria University</i>
1:15pm – 1:30pm	ID 239: Collaboration and the Future Focus on Sustainability and Digitalisation: An Explorative Comparative Analysis, <i>Prof Suzanne Wilkinson</i> <i>Auckland University of Technology, New Zealand</i>	ID 180: Integrating Artificial Intelligence and 4D BIM for Enhanced Scheduling and Resource Management in Construction Projects: A Comprehensive Review <i>Ali Alashwal</i> <i>Western Sydney University</i>	ID 173: Achieving Net Zero Energy Homes Through Space Heating Electrification <i>Zheng Wang</i> <i>Deakin University</i>	ID 74: Social Procurement Practice Disclosure in Project-Based Organizations: Insights of Supplier Diversity Initiatives from the Global Top 100 Construction Organizations <i>Kerui Lyu</i> <i>University of Sydney</i>	ID 129: Preventing Occupational Noise-Induced Hearing Loss in Construction <i>Imriyas Kamardeen</i> <i>Deakin University</i>	
1:30pm – 1:45pm	ID 107: Information Management Systems in Construction: A Narrative Review of Approaches and Solutions from Past to Present <i>Mohammad Saeed Heidary</i> <i>The University of New South Wales</i>	ID 232: Digital Innovation to Enhance Tertiary Education <i>Rosalinde McCarthy</i> <i>Durban University of Technology, South Africa</i>	ID 99: Experimental Study of the Thermal Performance Between Green Roof and Cool Roof as Part of Urban Heat Mitigation Strategy <i>Nardo Wai</i> <i>Victoria University</i>	ID 172: Mixed-Income Housing Developments in Africa: Lessons Learned <i>Temitope Olaniran</i> <i>Durban University of Technology, South Africa</i>	ID 8: Evaluating the Virtual Desktop Performance of Archicad Software within Simulation-Based Teaching of Two New Zealand Diploma in Architectural Technology Papers <i>Malachy McGarrigle</i> <i>Unitec Institute of Technology, New Zealand</i>	ID 238 (Online): GIG Workforce Management: An Employee Share Ownership Approach <i>Fortune Aligbe</i> <i>University of Johannesburg, South Africa</i>
1:45pm – 2pm	ID 248: Integrating Heritage Building Information Modeling and Energy Retrofitting for Sustainable Preservation: A Review of Challenges and Opportunities in New Zealand <i>Mina Kakouei</i> <i>Massey University, New Zealand</i>	Workshop on Applications of Generative AI in Construction Project Management Workshop Facilitator: <i>Dr Amir Ghapanchi</i> <i>Victoria University</i>	ID 227: Factors Influencing the Embodied Carbon of a Concrete Structure <i>Safat Al-Deen</i> <i>The University of New South Wales</i>	ID 262: Early Contractor Involvement in a Mandaean Place of Worship <i>Anoush Chohilli</i> <i>LADCO Construction, NSW</i>	ID 46: Well-Being and Productivity in the Construction Industry Through a Gendered Lens: A Conceptual Framework <i>Prakriti Pokhrel</i> <i>Western Sydney University</i>	
2pm – 2:15pm	ID 255: Emerging Technologies in Site Management: Insights from New Zealand <i>An Le</i> <i>Massey University, New Zealand</i>		ID 13: System Dynamics (SD) Application in Carbon Trading Research in the Construction Industry: A Systematic Review <i>Augustine Senanu Komla Kukah</i> <i>Western Sydney University</i>	ID 9: Evaluating the Coherence of Victoria's Local Jobs First Policy: Insights from Strategic, Performance and Process Management Perspectives <i>Ndukwe Chigozie</i> <i>The University of Melbourne</i>	ID 223: Gender Roles in Nguni Culture and Its Implications on Architectural Design: Towards a Mixed-Use Development in Warwick Junction, Durban <i>Nandipa Sozoyi</i> <i>University of KwaZulu Natal, South Africa</i>	ID 278: Framework of End-user-Integrated Design Process for Improving the Performance of Buildings <i>Sabrina Nazeer</i> <i>Deakin University</i>
2:15pm – 2:30pm	ID 44: Towards Smart Supply Chains in Construction: A Systematic Literature Review <i>Larry Hu</i> <i>University of Canberra</i>		ID 275: Evaluating Blockchain Platforms for Trustworthy Procurement and Management of Building Services <i>Sachindra Hewawitharana</i> <i>Western Sydney University</i>	ID 60: The Aging Architecture Sector: Realities and Solutions <i>Matt Stevens</i> <i>Western Sydney University</i>		

Day 2: Parallel Session 4

Tuesday, 26 November 2024, 2:45pm - 4:15pm

Themes:	Stream 1: Advancing Workforce Skills and Ethics in Construction	Stream 2: Frameworks and Methodologies for Sustainable Construction Management	Stream 3: Sustainability and Stakeholder Engagement in Residential Projects	Stream 4: Sustainable Design Practices for the Built Environment	Stream 5: Student-Centred Learning: Engagement and Interaction	Stream 6: Green Infrastructure: Advancing Sustainable Development Practices
Session Chair:	Dr Nilupa Herath <i>The University of Melbourne</i>	Dr Chandana Siriwardena <i>Massey University, New Zealand</i>	Dr Sajani Jayasuriya <i>RMIT University</i>	Prof Imriyas Kamardeen <i>Deakin University</i>	A/Prof Sepani Senaratne <i>Western Sydney University</i>	A/ Prof Ehsan Yaghoubi <i>Victoria University</i>
Session Co-chair:	Dr Nima Izadyar	A/Prof Paul Joseph	Dr Melissa Chan	Dr Mengbi Li	Ms Shiran Geng	Dr Kumudu Weththasinghe
Room:	Level 11, Rm 1111	Level 11, Rm 1110	Level 12, Rm 1211	Level 12, Rm 1212	Level 11, Rm 1114	Level 12, Rm 1213
2:45pm – 3pm	ID 47: Uncovering Skills: University Curriculum Coverage Brendan Kirkland <i>Western Sydney University</i>	ID 55: Cost Planning for Sustainable Building Projects: Towards the Development of a Conceptual Sustainable Cost Adjustment Framework Cameron Beard <i>University of Newcastle</i>	ID 35: How Build-to-Rent and Build-to-Sell Residential Developers' Model Contexts Compare When Considering a Sustainable Construction Approach - A Case Study Linda Kestle <i>Unitec institute of Technology, New Zealand</i>	ID 209: Alone Time: Individual Quiet Study Spaces in Green Academic Libraries Neda Abbasi <i>Central Queensland University</i>	ID 5: Online Engagement and Academic Performance in Construction Management Education: An Analysis by Gender and Residency Status Riza Sunindijo <i>The University of New South Wales</i>	ID 204: Sustainable Building Practices Berhane Gebreslassie <i>Victoria University</i>
3pm – 3:15pm	ID 258: A Preliminary Investigation of the Requirements for Enhancing Personal Integrity of Construction Professionals in a Developing Economy Lekan Ojo <i>Hong Kong Polytechnic University</i>	ID 38: Sustainable Logistics Planning for Off-Site Construction: A Narrative Review Lily Liu <i>The University of New South Wales</i>	ID 20: Analyzing Construction Stakeholder Perceptions in Indonesia: Analytic Hierarchy Process Approach for Quality, Cost, and Carbon Emission Assessment Angga Trisna Yudhistira <i>Universitas Gadjah Mada</i>	ID 162: Greening Australian Homes: Investigating the Readiness of Building and Real Estate Sectors for Energy Efficiency Disclosure Nimasha Hulathdoowage <i>Deakin University</i>	ID 37: Timetable Tactics: Boosting Level 3 Engagement and Retention in Built Environment Courses, Darryl Morgan <i>University of South Wales, UK</i>	ID 33: Strategies for the Adoption of Green Finance in Green Building: The Case of Ghana Caleb Debrah <i>The Hong Kong Polytechnic University</i>
3:15pm – 3:30pm	ID 98: Construction Sector Shocks & Stresses: Insights from the Industry Elrasheid Elkhidir <i>University of KwaZulu Natal</i>	ID 237: Towards a Conceptual Framework to Assess the Understanding of a Relevant Construction Issue: Proposing a Methodological Framework Natalia Ortega <i>Massey University, New Zealand</i>	ID 181: Exploring Factors Influencing Residential Property Purchase Decisions: A Pilot Study in New Zealand Wajahat Ali <i>Massey University, New Zealand</i>	ID 58: Enhancing Campus Quality: A Focus on Microclimate Dmitry Ivanov Mott MacDonald, Melbourne, Australia	ID 56: Building Stronger Foundations: Exploring the Impact of Tutor and Peer Connections Hannah Seale <i>University of South Wales, UK</i>	ID 168: How Building's Envelopes are Affected by Atmospheric Water Harvesting Techniques? Maggie Tang <i>University of Newcastle</i>
3:30pm – 3:45pm	ID 48: Uncovering Skills: Construction Industry Expectations Brendan Kirkland <i>Western Sydney University</i>	ID 92: Introducing an Agent-Based Model of Construction Multi-Project Portfolios, Jaleh Sadeghi <i>Massey University, New Zealand</i>	ID 68: Leveraging Stakeholder Management Strategies for Construction Project Success: A Systematic Literature Review Zahra Majd <i>Bond University</i>	ID 102: External Pressures and Organisational Drivers: Uncover the Decision-Making of IAQ Interventions in Post-Covid Victoria Yan Zhang <i>The University of Melbourne</i>	ID 253: Student Experiences of Challenge-Based Learning and Sustainable Mindset Development, Gesa Ruge <i>Curtin University</i>	ID 100: A Review of Urban Water Demand Influencing Factors and Forecasting Methods for Infrastructure Planning Hamidreza Peivastehgar <i>Massey University, New Zealand</i>
3:45pm – 4pm	ID 188: The Future of Reconciliation Action Plans (RAPs) and the Australian Construction Industry: Some Case Studies and Experience, Mary Hardie <i>Western Sydney University</i>		ID 206: A Conceptual Framework to Manage Intragroup Conflicts in Construction Projects: The Role of Team Climate and Stakeholder Engagement Nilmi Bhagya Senarath P. A. <i>Deakin University</i>	ID 76: Enhancing Design Skills for Energy-Efficient Affordable Housing Paulo Vaz-Serra <i>The University of Melbourne</i>	ID 257: Developing a Virtual Inspection Platform for Online Teaching and Training of Construction Students, Le Li <i>Victoria University</i>	ID 114: Drivers and Barriers of Green Building Development in Qatar Tayyab Ahmed <i>Qatar University</i>
4pm – 4:15pm	ID 130: Beneficial Impacts of Construction Learnership in Developing Economy Andisiwe Dumako <i>Walter Sisulu University</i>		ID 54: Examining the Relationship Between the Efficiency of Energy Consumption in Residential Buildings and Behaviour of Residents Mina Ranjbaran <i>Victoria University</i>		ID 52: Framework for Student Wellbeing-Centred Built Environment Education, Marini Samaratunga <i>Western Sydney University</i>	

AUBEA2024 Conference

Keynote Speakers



Stephen Sammartino

November 25, 9:45am - 10:45am

Futurist Steve Sammartino is a tour de force in the field of technology. His energy and humour on stage have made him sought-after speaker around the globe. An expert in AI's profound implications for business and society, Steve has been immersed in Computational Intelligence systems from the tender age of 10.

Steve goes beyond theory and brings lessons from his own tech ventures. His latest Macro3D, a ground-breaking AI and robotics company – which 3D prints houses. Since co-founding the company he has managed to 3D print a house, and is now embarking on building the world's first home built entirely by AI. An accomplished author, Steve has written three best-selling books on the subject of technology and its future. As a testament to his compelling insights, he has given a TED talk and is the host of the popular national Technology and Business TV show on Channel 9, "The Rebound" – now in its 4th Season.

Steve's takes the complex and makes it simple, and human. This sentiment is captured in his viral videos, which boast over 100 million views - his drivable Lego Car being a prime example. As a respected media commentator, his views are widely sought after, making him an authoritative voice in the tech industry.



Jorge Chapa

November 25, 11am - 12pm

As its Chief Impact Officer, Jorge ensures the Green Building Council of Australia (GBCA) strategic priorities, partnerships, products and services, including Green Star, accelerate the transformation of Australia's built environment – delivering healthier, more resilient, and positive places for people and nature.

He chairs WorldGBC's Global Commitment for Net Zero Carbon Buildings Taskforce and WorldGBC's ESG working group. He is a member of Climate Bond Initiative's Low Carbon Buildings Technical Working Group, GRESB's Real Estate Standards Committee, Carbon Risk Real Estate Monitor's Global Industry Committee, and part of Science Based Target Initiatives Buildings Technical Expert Group. He is also a Board Director at GreenFleet.



Clare Shiell

November 26, 9am - 10am

Clare Shiell is the Executive Director, Portfolio Delivery at Plenary, a leading independent long-term investor, developer and manager of public infrastructure, specialising in public-private partnerships and precinct development. Clare's strategic oversight of a diverse portfolio of projects, including the \$1.5 billion New Footscray Hospital Project, which is being delivered in partnership with the Victorian government and Western Health.

With over 24 years of experience spanning both public and private sectors, Clare is a leader delivering some of Victoria's most successful large-scale PPPs across sectors such as Justice, Health, and commercial infrastructure. Managing complex teams, navigating risks, and overcoming challenges to achieve outstanding project outcomes have been defining features of her career. Clare will share her insights into cultivating transformational leadership and driving meaningful change within the demanding landscape of infrastructure development.

AUBEA2024 Conference

Plenary Panel Sessions

Plenary Panel Session 1

Circular Economy Research Network Australia Pacific (CERN APac): Building Skills for a Circular Economy

November 25, 12:45pm - 1:45pm

This panel will explore the critical intersections between the built environment, skills development, and education within the framework of the circular economy. As Australia transitions toward a circular economy to support its net-zero targets, the built environment plays a key role through strategies such as reusing structures and implementing efficient building practices. However, challenges remain in terms of market barriers, unclear roles, and procurement issues.

To address these challenges, there is a growing need for a workforce skilled in innovative products, materials, and recovery techniques. This session will discuss how advancing education and skills can directly impact circular economy practices in the built environment. Panelists will highlight the pivotal role that engineers, architects, and other professionals can play in driving sustainable outcomes through this integrated approach. Join us as we explore how enhancing skills and education can propel both the built environment and circular economy practices forward.

Panellists

Professor Usha Iyer-Raniga (Facilitator), Gavin Cotterill, Rob Turk, Dr Mayuri Wijaysundara, Duy Le, Ani Chakraborty GAICD

Plenary Panel Session 2

Performance-based legislation: facilitating innovation or negotiated compliance?

November 25, 3:40pm - 5:00pm

Proponents of performance-based legislation argued that it encourages innovation by allowing designers greater flexibility to meet minimum health, amenity and safety standards. By adopting a performance-based approach designers can utilize new technologies and methods tailored to specific projects rather than adhering strictly to prescriptive codes, which may be outdated or overly restrictive. Theoretically, this approach has the ability to adopt cutting-edge solutions, ultimately leading to higher quality and more sustainable buildings.

However, critics contend that the flexibility inherent in performance-based codes could lead to a tendency towards negotiated compliance, where designers may seek to develop performance solutions through negotiation to cut corners and reduce costs. This session will discuss whether the existing regulatory frameworks ensure accountability and prevent such practices.

The discussion will focus on whether the current built environment curriculum provided by the university sector in the use of performance-based legislation is adequate to meet these challenges. Specifically, is sufficient content related to the need to develop a culture of responsibility among industry stakeholders to avoid the pitfalls of negotiated compliance when using performance-based legislation provided?

Panellists

Dr. Darryl O'Brien (Panel Facilitator), Stephen Kip, Bronwyn Weir, Tass Georgas, Steven Baxas

Plenary Panel Session 3

Innovation in Built Environment Education: The VU Block Model®

November 26, 10am - 11am

This panel session introduces attendees to Victoria University's innovative VU Block Model® of teaching, with a specific focus on its application in Built Environment programs. The VU Block Model®, a revolutionary approach to course delivery, has transformed the learning experience for students and educators alike. Our diverse panel of experts will explore how this model enhances education related to the Built Environment, aligning with the conference theme of "Building for a Sustainable Future."

The session will highlight the strengths and opportunities presented by this delivery model, including:

- Intensive, focused learning periods
- Enhanced student engagement and success rates
- Improved alignment with industry practices and expectations
- Flexibility in incorporating emerging trends and technologies

Through the questions posed to this expert panel and related discussions, attendees will gain a comprehensive understanding of how the VU Block Model® has enhanced education related to the Built Environment. The panel will also address challenges encountered and solutions developed, providing valuable insights for educators and practitioners.

Panellists

Dr Joshua Johnson (Panel Chair), Professor Andrew Smallridge, Associate Professor Loretta Konjarski, Associate Professor John Weldon, Dr Mengbi Li, Dr Hing-Wah Chau, Ms Lauren Unger.

AUBEA2024 Conference Workshop

Workshop

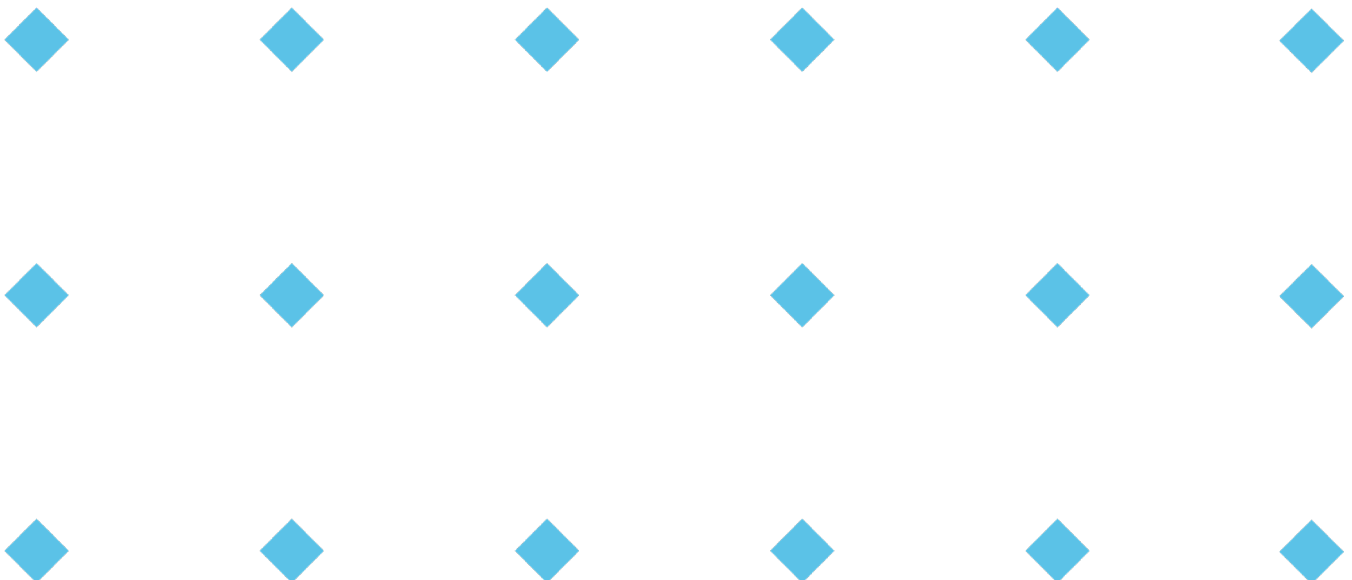
Applications of Generative AI in Construction Project Management

November 26, 1:45pm - 2:30pm

Unlock the transformative power of Generative AI in construction project management with this focused 30-minute workshop. The session kicks off with a 20-minute deep dive into the benefits and applications of Gen AI, featuring real-world case studies that demonstrate how this technology can boost project efficiency and streamline decision-making. Following this, engage in a dynamic 10-minute interactive brainstorming session to explore innovative AI applications tailored to your projects and challenges. We'll also discuss potential limitations to provide a balanced view of this cutting-edge technology. Don't miss this opportunity to gain valuable insights and ideas for your project management strategies!

Facilitator

Dr Amir Ghapanchi



47th Australasian Universities Building Education Association Conference

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