

Speaking Program

12th Australian Small Bridges Conference

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Gold Coast Convention and Exhibition Centre
Tuesday 22nd – Wednesday 23rd October 2024



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SPEAKING PROGRAM – 12th AUSTRALIAN SMALL BRIDGES CONFERENCE 2024	
TIME	DAY ONE – TUES 22nd OCT
8.00	Registration & Exhibition Opens - Arrival Tea/ Coffee in the Exhibition Hall
8.40	CONFERENCE OPENING
8.50	<p><u>ROOM A- BRIDGE ASSET MANAGEMENT-1 - Tim Heldt</u></p> <ol style="list-style-type: none"> Buzz Word Bingo: Demystifying Asset Management for Bridges. Torill Pape, Dept of Transport & Main Roads National Harmonisation of Technical Specifications. Ash Kesarwani & Diana Zagora, Transport for NSW Digital Twins for Asset Management of Bridges. Maria Rashidi, Western Sydney University The Integration & Application of Data, Digital Tools & Algorithms to Assist with Management Strategies in Sustaining Public Infrastructure Assets. Kim Biau Chua, Aurecon <p><u>ROOM B- CONCRETE IN BRIDGES – Scott Matthews</u></p> <ol style="list-style-type: none"> Crack Control Provisions in AS5100.5-2017 for Bridge Pier Walls: An Evaluation & Comparison with CIRIA C766, Suthan Mohanakumar, Arcadis A Field Investigation of deterioration of Reinforced Concrete using a UAV-based Sounding Method – A Case Study with Field Validation. Ash Pender, Arcadis; Harsh Rathod, Niricson; Shannon Rosario, Dept of Transport & Planning Effective Thermal Management in Precast Concrete Elements: A Case Study on Victoria Park-Canning Level Crossing Removal (LXR) Project. Inam Khan, BCRC Review on Fatigue Assessment of Concrete Bridge Infrastructure. Prof Rebecca Gravina, Uni of Qld <p><u>ROOM C- PEDESTRIAN BRIDGES-1-- Ross Pritchard</u></p> <ol style="list-style-type: none"> Breakfast Creek / Yowoggera Bridge. Alistair Smith & Paul Bradbury, SMEC Public Safety Barrier Design & Strengthening of the Burgundy Street Pedestrian Bridge - Dayo Ogundeji & Marco Vargas, WGA; Tibi Ranjbartoutouei, Interface Rail Engineering Malaga Arch Footbridge. Behzad Golfa, GHD Lorne Pedestrian Bridge & Moggs Creek Bridge – Design & Construction Lightweight Replacement Solutions that go the distance. Patrick Bigg, Timber Restoration Systems
10.30	MORNING TEA & EXHIBITION
11.10	<p><u>ROOM A- MONITORING & INSPECTION – Kenny Luu</u></p> <ol style="list-style-type: none"> Wired for Safety: Real-time Monitoring of Salerno Bridge. Gavin Chadbourn, pitt&sherry, Yvonne Ulas, City of Gold Coast Real-time Bridge & Traffic Monitoring for the Asset Management Paradigm Shift. Govinda Pandey, Rockfield Technologies Australia Use of Monitoring to Manage the Risks in the Delayed Repair of a Deteriorating Culvert. John Vazey, EngAnalysis. Remotely Piloted Aircraft (drone) for Bridge Asset Inspection. Diana Zagora, Transport for NSW Integrating Robotic Use & Tactile Methods for Comprehensive Bridge Inspections. Kaan Karabina, Sterling Infrastructure <p><u>ROOM B- BRIDGE DESIGN – Sabina Piras</u></p> <ol style="list-style-type: none"> Design of the New Beaumont Bridge – Crossing New Zealand's Largest River. Jeremy Jennings, WSP NZ 60m Span Spliced Super T Bridge Design. Noritomo Maruo, SMEC Underbridge Pipe Supports – A Guide & Case Studies. Riley Williams & Roger Shemilt, Anchorage Pipe Supports Lahrs Road Bridge – Reuse of a Reused Bridge – Wholistic Modification & Substructure Strengthening with FRP. Tracey Knight & Aida Bartels, Arup Precast Prestressed Concrete Beams made Continuous over Supports – Variability of Long-term Design Actions. Konrad Slominski, Arcadis <p><u>ROOM C- PEDESTRIAN BRIDGES-2 - Alyssa Edwards</u></p> <ol style="list-style-type: none"> O'Keefe Street Velobridge. Conor Doherty, AECOM Elizabeth Avenue Pedestrian Overpass - Clontarf. Loïc Fields, SMEC Key Constraints of the Design & Construction of a Single Span Cyclist Bridge Replacing A 3-span Road Bridge Over a Rail Corridor. Aimee Beheshti & Michael Kozij, Queensland Rail Pedestrian Bridge Experience & Lessons Learned. Parivash Shams-Abadi, & Alex Schild, Mott MacDonald Renewal Of Railway Corridor to Develop Tourism Access in Regional Victoria. Eric Hooimeyer, Teleo Design

1.10	 LUNCH & EXHIBITION
2.10	<p><u>ROOM A - BRIDGE ASSET MANAGEMENT-2 -Sri Sriranjana</u></p> <ol style="list-style-type: none"> 1. Bridge Assessments – Plausibility Gaps & Pitfalls. Adam O'Rourke, Ductile Consulting Engineers 2. Bridge Asset Management: The Good, The Bad & The Future. Tim Heldt, Osborn Consulting Engineers 3. Implementation of Risk Based Culvert Assessments at Port Macquarie Hastings Council. Adam O'Rourke, Ductile Consulting Engineers 4. Load Rating Assessment & Strengthening of Existing Masonry Arch Bridge on the Eltham Yarra Glen Road in Victoria. Awais Chaudry, Hatch <p><u>ROOM B- MAKING BRIDGES SAFER - FIRE & CRASHES – Jeremy Jennings</u></p> <ol style="list-style-type: none"> 1. Drivers, Challenges & Considerations in Upgrading Bridge Barriers Joshua Hniat, pitt&sherry 2. AS5100.1 14.4 Acceptance Criteria for Bridge Traffic Barrier types, A Discussion Dane Hansen, LB Australia 3. Fire Hazards in Bridges – A Current Review. Kenny Luu & Laura Roberts, SMEC 4. Suggested Changes to AS 5100 Bridge Design for Fire Design. Ross Pritchard, SMEC <p><u>ROOM C - SUSTAINABILITY & THE ENVIRONMENT - Dan Tingley</u></p> <ol style="list-style-type: none"> 1. Embedding Sustainability in Standards & Specifications. Diana Zagora, Transport for NSW 2. Environmental Design of the Henderson Rd Crossing of Corhanwarrabul Creek - A Reflection 5-years Post-opening. Barry King, Civinfra 3. Fauna Management and Challenging Ground Considerations for Culvert and Bridge Design for the Healesville-Koo Wee Rup Road South Project. Veeral Patel, Aurecon 4. A Carbon Quandary – Managing Embodied Carbon in Bridges. Ryan Dewar, Civil Structures Studio
3.50	AFTERNOON TEA
4.20	<p><u>ROOM A- BRIDGE STRENGTHENING- Kenny Luu</u></p> <ol style="list-style-type: none"> 1. Bli Bli Bridge – Girder Rehabilitation & Strength Restoration. Ben Wiggins, Dept of Transport & Main Roads, Philip Stockwell, Jacobs 2. Carbon Fibre Strengthening: A Sustainable Option & Case Studies of Surface Preparation on Bridge Projects. Grant Dowling, Sika 3. Bridge Crosshead Strengthening – A Case Study About FRP Design Optimisation. Umberto Rico, Mapei S.P.A & Aviral Choudhary, Mapei Australia 4. Strengthening of Bridge Structures: A Review of Existing Methods with Recommendations. Saman Karimi, Western Sydney University <p><u>ROOM B- BRIDGE DESIGN & PROJECTS - 1 – (INCLUDING- FLOODS & INCREASING LOAD CAPACITY) - Michal Krotofil</u></p> <ol style="list-style-type: none"> 1. Restoring Connectivity: Designing a Resilient Puketapu Bridge After Cyclone Gabrielle. Sabina Piras, WSP New Zealand 2. Design & Construction Challenges Encountered During the Replacement of the Medway River Rd Bridge at Charlston, Nova Scotia. Dan Tingley, Wood Research & Development. 3. Road Bridge Upgrade – Feasibility Study & Concept Design. Will Cleggett, Sterling Infrastructure 4. Neerkol Creek (Bridge 1), Stanwell, Qld – Detailed Assessment & Temporary Bridge Strengthening. Debbie McMillan, Aurecon & David Trayner VSL <p><u>ROOM C - BRIDGE & CULVERT DESIGN – Susie Pascoe</u></p> <ol style="list-style-type: none"> 1. Cost Effective Steel Concrete Composite Bridge Beams. Wolfram Schwarz, WSP 2. Case Study - Design & Construction of the Integral Bridges on the New Bridgewater Bridge Project. Darnell Santos, Jacobs 3. Stock Underpass Standard Drawings. Scott Crawshaw, Dept of Transport & Planning 4. Replacement of Existing Bridge Structures with Culverts. Tony Phan, KBR
6.00	 <p style="text-align: center;">CONFERENCE NETWORKING DRINKS and WOMEN IN BRIDGES NETWORKING DRINKS</p>
7.15	<p>CONFERENCE DINNER (Optional) at GCCEC Entertainment</p> <p>Mat Stokes & Mark Divola - Musical Duo Blaze Magic</p>

DAY TWO - WEDS 23rd OCT

7.30	<p>ROOM C - WOMEN IN BRIDGES BREAKFAST FORUM 7.30 Breakfast Service Commences & Networking - 7.45 Forum Commences - 8.25 Forum Concludes PANEL MEMBERS:</p> <ul style="list-style-type: none"> • Dr Torill Pape, Deputy Chief Engineer, Structures, Qld. Dept of Transport & Main Roads • Diana Zagora, Director Civil Engineering Infrastructure, TfNSW • Aida Bartels, Associate Principal, Arup • Sabina Piras, Principal, WSP, NEW ZEALAND • Tiffany Parker, Coordinator Transport Structures, City of Gold Coast
8.00	Registration & Exhibition Open - Arrival Tea/Coffee
8.35	CONFERENCE OPENING
8.40	<p><u>ROOM A- TIMBER BRIDGES – Tim Heldt</u></p> <ol style="list-style-type: none"> 1. Bass River Bridge – A Three-Pinned Arch Bridge for Traffic & Pedestrians. Dan Tingley, Wood Research & Development 2. Pymont Bridge – Challenges Associated with the Over-Water Structural Remediation of a Heritage-Listed Timber Bridge. Max Panafieu & Daniel Lu, Marine & Civil Maintenance; Maverick Penman, FSC Range 3. Allowing for Radial Expansion in Timber Pile Wrap Design & Construction Practices. Stephen Richards, Wood Research & Development 4. Maintenance Plan for Sustainable Development of Timber Vehicle Bridge in New Zealand. Hanshen (Iris) Wang, University of Auckland 5. Restoration of Old Timber Bridges in Rural Australia with Difficult Site Conditions. Zane Li, Wood Research & Development <p><u>ROOM B - DESIGN FOR CONSTRUCTION WHILE MAINTAINING THRU TRAFFIC- ROAD & RAIL PROJECTS - David Crowe</u></p> <ol style="list-style-type: none"> 1. Level Crossing Removal - Waurm Ponds Duplication Project Fyans Street Bridge SPMT Transport & Jacking Analysis. Darren Chow & Fatima Parreno, Robert Bird Group 2. Steel Half-Through Girder Rail Bridges: Recent Experience in Victoria. Martin Holt, Mott MacDonald & John Cain Arup 3. Union & Mont Albert Road Level Crossing Removal Bridges: Construction Led Design. Lachie Gallop, Jacobs 4. Staged Construction on the Existing Alignment: Bridge Replacement over Mandagery Creek, Manildra. Long Bai, Stantec and Peter Hamilton of TfNSW 5. Strengthening Works of Barry Road Bridge Over Rail. Kirush Kirushanthan, KBR <p><u>ROOM C- GEOTECHNICAL ASPECTS -Scott Matthews</u></p> <ol style="list-style-type: none"> 1. (Not So) Simply Supported – The Temporary Propping of Logan Road Bridge. Philip Stockwell, Andrew Reeves & Yasuto Nakamura, Jacobs 2. Garie Road Flood Recovery - Anchored Bored Pile Wall Slope Stabilisation. Marcia Prelog & James Dickson, Aurecon 3. Geotechnical Solution to Address Structural Challenges for a Bridge Over a Creek with Compressible Soils. Michael Lee, SMEC 4. Management of Construction Vibration to Reduce Risk of Damage to Structures. Mohamed Nooru-Mohamed, Dept of Transport & Main Roads 5. Design & Construction of Bridges Subjected to Mine Subsidence in New South Wales, Case Study. Michal Krotofil, SMEC Australia
10.35	MORNING TEA

SESSION CHAIRS

- Alyssa Edwards, Pritchard Francis
- Dan Tingley, Wood Research & Development
- David Crowe, pitt&sherry
- Jeremy Jennings, WSP NZ
- Kenny Luu, SMEC Australia
- Michal Krotofil, SMEC Australia
- Ross Pritchard, SMEC Australia
- Susie Pascoe, Sterling Infrastructure
- Sabina Piras, WSP NZ
- Sri Sriranjjan, Public Transport Authority of WA
- Scott Matthews, Leading Infrastructure
- Tim Heldt, Osborn Consulting Engineers
- Dr Torill Pape, Dept of Transport & Main Roads
- Tracey Knight, Arup

11.10	<p><u>ROOM A- MAINTENANCE, PROTECTION & REPAIR - Tracey Knight</u></p> <ol style="list-style-type: none"> 1. Case Study: Repainting the Historic Victoria Street Bridge, Cambridge, New Zealand. Johann Myburgh & David Slinger, MCU-Coatings 2. Hickson Road – A Case Study in the Maintenance of Heritage Bridges. Troy Palmer, Marine & Civil Maintenance & Maverick Penman, FSC Range 3. Extending & Rehabilitating Aging Culverts with CFRP Wet Lay System: A Case Study of Pound Drain & Cannery Creek Culverts. Anthony Chen, Hatch 4. Strategies of Using Cathodic Protection for Buried Metal Culverts. Regina Sampaio, National Research Transport Organisation 5. Bridge Structural & Durability Assessment (Testing, Modelling, Analysis). Dr Farhad Nabavi, Technocrete Consulting Engineers <p><u>ROOM B- STEEL BRIDGES - David Crowe</u></p> <ol style="list-style-type: none"> 1. Assessment of Slender Steel Flexural Members to AS5100-2017 with use of Buckling Analysis. David Huggett, SMEC 2. Bluescope Composite Steel Road Bridges – Updating a Design Guide. Sabina Piras, WSP 3. Challenges in the Design of a 50m Steel Truss Bridge over Steels Creek. Muhammad Abdullah and Hassan Asif, Stantec 4. Design Considerations of Steel Box Girders Supporting Overhead Signage. Hasret Aydin, SMEC 5. Updating the Weathering Steel Guide for Australian Bridges. Raed El Sarraf, WSP <p><u>ROOM C- RAILWAY BRIDGES- 1 - Sri Sriranjani</u></p> <ol style="list-style-type: none"> 1. Management of Bridge Assets on the Arc Infrastructure Rail Network. Zia Rice, Arc Infrastructure 2. The Inspection & Assessment of Small Reinforced Concrete Railway Bridges with Unknown Reinforcement in Remote Scotland, UK. Conor Flannery, FSC Range 3. Enhancing Infrastructure Resilience: A Case Study of a Historic Bridge. Dr Alireza Zabihi, Hatch 4. Timber Rail Bridge Pier Replacements in the Historic Tablelands System. Harrison Fugate, BG&E 5. Woods Street Rail Bridge Design & Delivery of the Superstructure Renewal Works. Tanmay Vegad, Hatch
1.05	LUNCH & EXHIBITION
2.05	<p><u>ROOM A- BRIDGE DESIGN & PROJECTS – 2 – Ross Pritchard</u></p> <ol style="list-style-type: none"> 1. Koloona Drive Bridge Replacement. Mike Wright, InQuik Bridging Systems 2. The Design of First Helicoidal Ramp in Malaysia. Mohd Faizal Atan, Prolintas 3. Compressive Membrane Action in Bridge Deck Slab. Abdullah Zaid, RKF Engineering Services 4. Extending the life of the Garth Prowd Bridge, the epicentre of Noosa’s Iconic Triathlon – Technical & Tendering Successes & Learnings. Chris Dowding, Osborn Consulting Engineers <p><u>ROOM C- RAILWAY BRIDGES - 2 – Dan Tingley</u></p> <ol style="list-style-type: none"> 1. Managing Large Scale Bridge Inspection Contracts. Mel Cutajar and Susie Pascoe, Sterling Infrastructure 2. The Gap Underbridge Replacement – Design & Construction Constraints. Alberto Anca Pereira, AECOM 3. Comparison of Train Rolling Stock Loads to 300LA Configuration Over Multiple Span Lengths. Stephen Hives, V/Line 4. Railway Viaduct Deck Renewal Design. Tom Nichols, Sterling Infrastructure 5. Queensland Rail Tuckers Creek Bridge Emergency Propping & Repair Works. Antony Schofield, Arup
4.00	CONFERENCE CLOSE

Notes:

1. All presentations have been allocated 20 minutes. Delegates can quietly change streams mid-Session.
2. Speaking Sessions have a shared Q&A Panel Session of all Presenters from that Session after Speakers have presented at the end of that session.
3. Each Session will also have a Session Chair. This program lists just the presenting authors
4. The Summary Abstracts are in alphabetical order of the Abstract Title, and are brief summaries on the full abstracts which can be downloaded from www.smallbridges.com.au. Only the Speaker/s are shown in this handbook and not all co-authors. The full abstracts contain the biographies of all authors, and co-authors.
5. This Speaking Program was updated on 21 October 2024.