




Concrete NZ Conference 2023 Technical Programme

THURSDAY, 28 SEPTEMBER 2023			
8.30	Registration desk opens – Exhibition foyer		
	Heaphy 3		
9.00 – 12.00	Pre-conference workshop: Using natural pozzolana as a partial cement replacement for sustainable concrete (Arrival tea and coffee 8.30-9.00am)		
	Heaphy 1&2	Brooklyn 1&2	
11.00 – 12.00	Concrete NZ – Precast Meeting	11.30 – 12.00	Concrete NZ – Readymix Annual Meeting
11.30 – 12.30	Lunch & Exhibition open - Exhibition Hall A		
	Heaphy 1&2		
12.30 – 12.45	Conference Opening- Welcome and Mihi whakatau Organising Committee Chair, Moustafa Al-Ani		
12.45 – 14.30	Session 1 Chair: Rick Henry		
12.45 – 13.30	Keynote Address 1: Andy Taylor - Standards and Guides for Design of Concrete Buildings in the United States		
13.30 – 13.50	Nick Brazzale - Waimea Community Dam - An International Affair		
13.50 – 14.10	Paul Donoghue & Trevor Sawyer - A Collaborative Approach to Specifying Low Carbon Concrete		
14.10 – 14.30	Ronald Wessel - Bridge 63WL and 56WL - Design and Construction		
14.30 – 15.00	Afternoon Tea – Exhibition Hall A		
	Heaphy 1&2	Heaphy 3	
15.00 – 17.00	Session 2A Chair: Sara Broglio	Session 2B Chair: Kerry Newton	
15.00 – 15.20	Jarod Wilson- Cement Additives for a Sustainable Future	Dana Rotkovich - A Ready-Mix Perspective on Natural Pozzolans	
15.20 – 15.40	Dorian Borosnyoi-Crawley- Current developments in the seismic design of concrete-to-concrete connections in New Zealand	Nasser Almesfer - Lower Carbon Concrete Using Ground Granulated Blast Furnace Slag	
15.40 – 16.00	Stephen Lowde - Case Study: Te Waihorotiu Railway Station - Victoria St Entrance's Diaphragm Wall Transfer T Panel	Emanuele Naccini - Proposal for a new test methodology for reinforcement mechanical connections: impact loading at freezing temperatures	
16.00 – 16.20	Stephen Lowde - Case Study: Te Waihorotiu Railway Station - Substructure Waterproofing Design and Review	Harry Tran - Pore solution analysis of magnesium silicate hydrate binder systems	
16.20 – 16.40	Liang-Shou Wei - Cyclones, bridges, and sustainable solutions: A project case study of two 80-year-old RC bridges in Te Tai Tokerau	Vineet Shah - Pozzolanic potential of hydrated cement fines recovered from demolished concrete	
16.40 – 17.00	Charles Kerby - Experimental Study of Staggered Lap Splices in RC Structural Walls	Vineet Shah & Doug Sturrock - Reducing the Carbon Emissions of Construction Industry in New Zealand Using Hempcrete	

	Heaphy 1&2	
17.10 – 17.30	Concrete NZ Learned Society AGM	
17.30 – 18.00	Concrete NZ AGM	
18.30	President's Reception – Exhibition Hall A <i>Kindly Supported by Holcim</i>	
19.00	Casual Conference Dinner & Entertainment	

FRIDAY, 29 SEPTEMBER 2023		
8.00 – 13.30	Registration desk & Exhibition open	
	Heaphy 1&2	
08.20 – 10.40	Session 3 Chair: Alistair Russell	
08.20 – 09.00	Keynote Address 2: Romilly Madew - Future concrete solutions: Improving Resilience and Sustainability in the built environment	
9.00 – 9.20	James Mackechnie - Sand quality contribution in producing low carbon concrete	
9.20 – 9.40	Neil Lee - The critical chloride threshold & assessment of concrete structures	
9.40 – 10.00	Rosie Pagel - Development and Experimental Testing of a Novel Bridge Connection Under Tsunami Loading	
10.00 – 10.20	Joseph Thomas - Natural Pozzolans - An Introduction	
10.20 – 10.40	Luis Manuel De La Flor Juncal - Exploring the use of zeolite, calcined clay, and mussel shells powder in 3D Concrete Printing (3DCP) mixes	
10.40 – 11.10	Morning Tea – Exhibition Hall A	
	Heaphy 1&2	
11.10 – 13.00	Session 4	
11.10 – 12.00	Panel Discussion Moderator: Bernie Napp Confirmed Panellists: Romilly Madew , CEO, Engineers Australia Maria Juenger , Professor of Engineering, University of Texas Cyril Giraud , Head of Sustainability, Holcim Australia & New Zealand David Welsh , General Manager Commercial (Concrete Division), Fletcher Building Jennifer Taylor , Transformation Lead (Environment) Construction Sector Accord	
12.00 – 13.00	Lightning Talks Moderator: Jason Ingham Tasha Eagle - What are Carbon nanotubes and why are we putting them in concrete? John Marshall - Precast Floors are Alive & Well Milap Dhakal - Methyl Cellulose in 3D-printable Concrete Matt Cheyne - How Technology Helped to Build New Zealand's Busiest Train Station – Te Waihorotiu Station Dewi Todd-Jones - Giving concrete answers to Concrete Specifications! Banujan Balaskandan - Low-Carbon Binder Systems for Lunar Concrete: Opportunities and Challenges Jono Watkins - How we repaired concrete bridges slammed by Cyclone Gabrielle Alistair Russell - 5 things I wish I'd know about concrete earlier Mark Kurtovich - A New and Novel Approach to the Strengthening of Reinforced Concrete Using Near Surface Mounted Titanium Bars	
13.00 – 13.30	Lunch – Exhibition Hall A	
13.30	Range of Social Activities – Depart from Claudelands Events Centre	
18.30	Pre-dinner Drinks	
19.00	Formal Conference Dinner & Awards Evening	

SATURDAY, 30 SEPTEMBER 2023

8.00 – 13.00	Registration desk & Exhibition open	
	Heaphy 1&2	Heaphy 3
8.30 – 10.30	Session 5A Chair: Ralf Kessel	Session 5B Chair: Paul Donoghue
8.30 – 8.50	Trevor Sawyer - A NZ History and global literature review on the use of Natural Pozzolana	Gregory Durkin - He Hunga Hanga Mātou – building people through work-based learning
8.50 – 9.10	Ren-Jie Tsai - Seismic response of diagonally reinforce concrete coupling beams subjected to axial restraint: database and numerical modelling	Ferdinand Oswald & Rick Henry - Functionally Graded Concrete (FGC) // Development of concept suitable for use in New Zealand
9.10 – 9.30	Josh Wemyss - Exploring the feasibility of zeolite-modified blended cement for 3D Concrete Printing: a sustainable alternative for the concrete construction industry	Mohamed Mostafa - Hollow-core floor unit webcracking and retrofit using supplemental shear reinforcement
9.30 – 9.50	Claire Pascua - Design and testing of concrete wall-steel beam connections	Ryo Kuwabara - Residual Capacity of Reinforcing Steel Bars After Earthquakes
9.50 – 10.10	Ray Hudd - Connecting GFRP and Steel Reinforcement for Historic Wharf Repairs	Enrique Del Rey Castillo - Pilot study on using natural pumicite as a partial cement replacement in concrete
10.10 – 10.30	Hossein Askarinejad – Using Harakeke Fibre in Concrete	
10.30 – 11.00	Morning Tea – Exhibition Hall A	
	Heaphy 1&2	
11.00 – 12.45	Session 6 Chair: Moustafa Al-Ani	
11.00 – 11.45	Keynote Address 3: Maria Juenger - Developing rapidly adoptable solutions for clinker reduction using natural pozzolans	
11.45 – 12.05	Sam Allan & Brent England - Fibre Reinforced Polymer Bridge Deck Strengthening	
12.05 – 12.25	Sam Archer - New Zealand Green Building Council Embodied Carbon Calculations	
12.25 – 12.45	Jamil Khan - Design and Construction Challenges of Turbine-Generator Pedestal Structures for Tauhara Geothermal Power Plant	
12.45 – 13.00	Sandy Cormack Award and Conference Closure Learned Society President, Rick Henry	

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