



NZTA Bridge & Geotechnical Conference 2024

8 - 9 July
Claudelands, Hamilton

Conference Programme



NZTA Bridge & Geotechnical Conference 2024

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Day 1: Monday 8 July 2024

08.30 – 10.00	Karakia/mihi <i>Brian Nicholas, Regional Lead-Māori: Te Waka Kōtua: Engagement and Partnerships – Te Mātangi</i> Address from Conference Chairs <i>Moustafa Al-Ani & Stuart Finlan</i> Conference Opening <i>Sulo Shanmuganathan, Chief Engineer, NZ Transport Agency Waka Kotahi</i> Recent developments in the seismic design of bridges in the United States <i>Ian Buckle</i>		Heapy 2&3
10.00 – 10.30	Morning Tea		Heapy 1
10.30 – 12.30	CONCURRENT SESSION 2		
	2A Room: Heapy 2&3 Chair: Moustafa Al-Ani	2B Room: Brooklyn 2 Chair: Dewi Todd-Jones	2C Room: Brooklyn 1 Chair: Stuart Finlan
10.30 – 10.50	Eco-Viaduct: Innovation and Resilience for the Manawatū Tararua Highway <i>Jack Manners</i>	The Wairoa River Bridge: A Value for Money Story <i>Safia Moniz</i>	MBIE Work Program Update (Structural and Geotechnical) <i>Kiran Saligame</i>
10.50 – 11.10	Manawatū Tararua Highway – Bridge 07 scour foundations using Deep Soil Mixing <i>Ralf Konrad & Thomas Northey</i>	Design of a New Type of Steel Trough Rail Bridge for KiwiRail <i>Owais Arshad</i>	Evolution of the New Zealand Geotechnical Database (NZGD): from regional recovery tool to a nationally-significant data asset <i>Kaley Crawford-Flett & Kiran Saligame</i>
11.10 – 11.30	SH5 Utuhina Stream Bridge Scour Protection: the challenges of delivering solutions to extend the life of aging assets <i>James Griffiths</i>	Design of the new Beaumont Bridge – crossing New Zealand's largest river <i>Kwan Chin</i>	Update on guidance being developed by NZGS <i>Ioannis Antonopoulos</i>
11.30 – 11.50	CRL Maungawhau Station – A case study in reducing construction emissions <i>Anton Stanisich</i>	Eastern Busway Alliance – Design of Reeves Road Flyover <i>Jim Chen</i>	National resilience assessment, risk control & network improvements <i>Richard Topham</i>
11.50 – 12.10	SH94 Homer Tunnel Avalanche Shelter: Part 1 – Geotechnical challenges and other factors influencing the design <i>Rob Bond</i>	Innovations in Design and Construction of the replacement SH1 Bridges over the NIMT Rail Line <i>Richard Nutton, Sam Lawson & Achini Ratnayake</i>	Geotechnical Asset Management Framework <i>Sivaram Thirumoorthy</i>
12.10 – 12.30	SH94 Homer Tunnel Avalanche Shelter: Part 2 – Structural solution and construction phase <i>Peter Routledge</i>	An overview of coming updates of AS 5100.4 and AS/ NZS 5100.6 <i>Jamil Khan & Mike Beamish</i>	Review and certification of geosynthetic materials for Waka Kotahi projects <i>Dante Legaspi</i>
12.30 – 13.30	Lunch		Heapy 1
13.30 – 15.30	Concurrent Session 3		
	3A Room: Heapy 2&3 Chair: Andrew Holland	3B Room: Brooklyn 2 Chair: Rhys Rogers	3C Room: Brooklyn 1 Chair: Rodney Hutchison
13.30 – 13.50	Te Ara o Te Ata: Mt Messenger Bypass - Cableway Design & Construction <i>Danny Beasant</i>	Cracked but not broken - Creative and sustainable repairs to cracked castellated girders <i>Tomasz Mirocha</i>	13.30 – 14.00 Musing of a Highway Geotech <i>William Gray</i>

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13.50 – 14.10	Te Ara Tupua – Challenges in the design of a near-shore bridge: a case study of collaborative design <i>Luke Storie & Liam Hall</i>	Forensic Investigation of Bridge Performance during Cyclone Gabrielle <i>Jono Watkins</i>	14.00 – 14.15 The importance of geomorphology when developing complex ground models – An example from the O’Mahurangi Penlink project <i>Rhys Graafluis</i>
14.10 – 14.30		Waipuna Bridge Half Joint Expansion Joints Replacement <i>Zhongyi Li</i>	14.15 – 14.30 Constructing highways over active Northland Allocthon landslides – two examples on the O Mahurangi Penlink Project <i>Susan Tilsley</i>
14.30 – 14.50	Cyclone Gabrielle Flood Recovery Response – Inspection, Classification and Remedial <i>Natalia Uran</i>	Cyclones, Bridges, and Sustainable Solutions: A Project Case Study of Two 80-Year Old RC Bridges in Te Tai Tokerau <i>Gavin Gribben</i>	Maintaining a safe and trafficable State Highway over a large slow-moving landslide <i>Christoph Kraus</i>
14.50 – 15.10	Tar Barrel Tunnel Bypass – KiwiRail MNL Resilience Project <i>Razel Ramilo & Mark Dawson</i>	Accounting for Carbon in Bridges - A cautionary tale <i>Lowri Swygart</i>	Bridging the Gap: Space Technology for Landslide Detection and Transportation Network Monitoring in New Zealand <i>Andrew Lees</i>
15.10 – 15.30		FRP deck strengthening design and construction observations <i>Brent England & Rebecca Johnson</i>	A Framework for Defining Yield Acceleration as the Seismic Capacity of Slope Stability: Insights from Diverse Methodological Approaches <i>Amir Alipour</i>
15.30 – 16.00	Afternoon Tea		Heaphy 1
16.00 – 17.30	CONCURRENT SESSION 4		
	4A Room: Heaphy 2&3 Chair: Ioannis Antonopoulos	4B Room: Brooklyn 2 Chair: Jess McFarlane	4C Room: Brooklyn 1 Chair: Dante Legaspi
16.00 – 16.20	Design and Construction for Geosynthetic Reinforced Soil Abutments (GRS) and Integrated Bridge Systems (IBS) <i>Lian Oh</i>	Australian Automated Access System Development and the Potential Benefits for New Zealand <i>Jeremy Waldin</i>	Importance of Preliminary Geotechnical Appraisal in Defining Slope Remedial Solutions <i>Sigfried Dupre</i>
16.20 – 16.40	Temporary Works Management in Bridge Construction <i>Natasha Jokhan</i>	NZTA Data Driven Structures Asset Management <i>Dewi Todd-Jones</i>	Managing Network Infrastructure Following Regional Scale Slope Instability: A Geotechnical Perspective <i>Hunter Jenkinson & Andrew Holland</i>
16.40 – 17.00	Case Studies on Bridge Repair and Design Strategies after Cyclone Gabrielle <i>Sabina Piras</i>	National Bailey Bridge Services and a Year in Review <i>Nigel Lloyd & Tony Mans</i>	Efficient Ground Investigation using Geophysical Methods in Emergency and Infrastructure Recovery <i>Tony Valentine</i>
17.00 – 17.20	SH25A Taparahi Bridge – Innovations in bridge design and delivery <i>Liam Edwards & Aimee Pene</i>	Out of sight but not forgotten: Providing for permitted overweight loads on NZ bridges <i>Andrew Ball & Andrew Dickson</i>	Design of Road Embankments on Soft Soil: Insights from Practice and Recommendations <i>Razel Ramilo</i>
18.00 – 18.30	Pre Dinner Drinks		Heaphy Foyer
18.30 – 22.00	Conference Dinner		Heaphy 2&3

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Day 2: Tuesday 9 July 2024

09.00 – 10.00	CONCURRENT SESSION 5		
5A Room: Heaphy 2&3 Chair: Nigel Lloyd	5B Room: Brooklyn 1 Chair: Kiran Saligame		
Bridge Economy <i>Rob Park</i>	The Rise of Geotechnical Engineering in New Zealand <i>Rodney Hutchison</i>		
Developments in the bridge sector to deliver efficiencies and preferred outcomes <i>Moustafa Al-Ani</i>	Current and future direction and development in the geotechnical space <i>Stuart Finlan</i>		
10.00 – 10.30	Morning Tea		Heaphy 1
10.30 – 12.30	CONCURRENT SESSION 6		
	6A Room: Heaphy 2&3 Chair: Liam Witherspoon	6B Room: Brooklyn 2 Chair: Jono Watkins	6C Room: Brooklyn 1 Chair: Sigfrid Dupre
10.30 – 10.50	Displacement Based Seismic Design, Including Extensive Liquefaction, to the NZTA Bridge Manual – Takitimu Flyover Bridge <i>Daniel Cvitanich & Cameron Weir</i>	Opportunities for Carbon Efficiency in Bridge Design <i>Hanna Davidson</i>	The advancement of rock fall protection measures in New Zealand <i>Eric Ewe</i>
10.50 – 11.10	Seismic and performance-based design of rock-socketed pile foundations for a network arch bridge <i>Alex Park</i>	A framework to estimate the carbon emission of bridge structures <i>Xiaoyang (Gary) Qin</i>	Complex Rockfall Mitigation and Ground Engineering – Construction and Maintenance Learnings <i>Tim O'Toole</i>
11.10 – 11.30	Using site-specific seismic hazard assessments to optimize ground improvement <i>Ben McKay</i>	Mixed Digital Maturity in Bridge Asset Management Systems – Steel Coatings Assessment Case Study <i>Raed El Sarraf</i>	The evaluation of 2D and 3D Rockfall modelling for Loop 2, SH94, Milford Road <i>Latasha Templeton</i>
11.30 – 11.50	A Discussion On Strength Gain Factors For Soil Units in the Upper North Island <i>Harshad Phadnis</i>	Thermal Metal Spray Standards and New Zealand Bridges <i>Willie Mandeno</i>	Rockfall Protection Structures SH1 Kaikōura Coastline - Performance and Management Since Installation <i>Jonathan Claridge</i>
11.50 – 12.10	Dealing with pumice – Lessons from the Bay link Project, Tauranga <i>Clive Anderson</i>	Parametric Digital Workflows for Bridge Engineering <i>Jonathan Adams</i>	Cyclone Gabrielle Emergency Response: Data Collection and Lessons Learned in Hawkes Bay <i>Joe Cant</i>
12.10 – 12.30	Determination of VS(30) and Site Class in accordance with TS 1170.5:2024 – A case study <i>Marco Holtrigter</i>	The Pūhoi to Warkworth Journey <i>Ted Polley</i>	Geospatial Management of Geohazards and Geotechnical Structures Across State Highway Network <i>Danielle Barnhill</i>
12.30 – 13.30	Lunch		Heaphy 1

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13.30 – 15.30		CONCURRENT SESSION 7	
	7A Room: Heaphy 2&3 Chair: William Gray	7B Room: Brooklyn 2 Chair: Liam Edwards	7C Room: Brooklyn 1 Chair: Sivaram Thirumorthy
13.30 – 13.50	Seismic design of an XblocPlus® revetment using multi-model approach <i>Mikias Yohannes</i>	KiwiRail Bridge 223A PNGL Make Safe Cyclone Recovery <i>Rudolph Kotze</i>	Slope Stability and Risk Management in Relation to Transport Corridors: A Case Study of Maungataniwha Range Slip Repairs on SH1 <i>Shaun Grieve & Dwayne Claassen</i>
13.50 – 14.10	Investigation and design of rock sockets in ECBF volcanoclastic channel deposits for large diameter piles in Pakuranga, Auckland <i>Dr Gregory Pinches & Liam Connor</i>	Bridge manual HN loading updates <i>Mike Beamish & Cameron Weir</i>	SH23 Raglan Road – Glentui Slump Emergency Design Build Repair <i>Mat Avery & Andy O'Sullivan</i>
14.10 – 14.30	Te Honohono ki Tai – Matakana Link Road bridge & geotech – Design and Construction <i>Ella Matuschka & Annaliese Boot</i>	Wairoa River Bridge: NU Advances in Superstructure Design Efficiency <i>Rob Presland</i>	Auraki Stream Road Retreat: Design and construction of a 55m cut slope along SH4 <i>Christoph Kraus</i>
14.30 – 14.50	Recommendation of design parameters and correlation to calculate the vertical capacity of steel piles derived from dynamic pile load testing <i>Raathiv Shanmuganathan</i>	Navigating Constraints: Design of the SH1 Otuauiwairoa Stream twin bridges <i>Jack Manners & Dan Sandilands</i>	The role of pragmatic designs and contractor-led solutions in emergency response – sharing experiences from the Bay of Plenty <i>Pedro Martins</i>
14.50 – 15.10	Case Study: SH1 NIMT Bridges - Bored Piles with a Base Driven Plug <i>Blair Matheson</i>	Tunnel Lining Design for Mt Messenger Bypass Project <i>Katerina Howard</i>	Central Hawke's Bay Cyclone Gabrielle Response – Lessons Learnt Combining Local Knowledge and New Technology <i>Robert Ferguson & Marcus Grierson</i>
15.10 – 15.30	Canary - Automated Trigger Action Response Plans for a Changing World <i>Jeremy Waldin</i>	Rehabilitation of Mangaotama Stream Bridge: A Case Study in Advanced Engineering Techniques and Project Management <i>Jonty Pretorius</i>	Takaka Hill 5 Sites Remediation – Cyclone Gita Recovery <i>Harris Bindon</i>
15.30 – 15.35	Move to next session		
	Session 8 & Closing		Heaphy 2&3
15.35 – 15.55	Dynamic response and modelling of monitored State Highway Bridges <i>Liam Wotherspoon</i>		
15.55 – 16.35	Bridges to Prosperity - Eliminating Poverty Due to Rural Isolation through Footbridge Networks <i>Hanna Davidson & Thomas Cooper</i>		
16.35 – 16.40	Conference Close <i>Moustafa Al-Ani & Stuart Finlan</i>		

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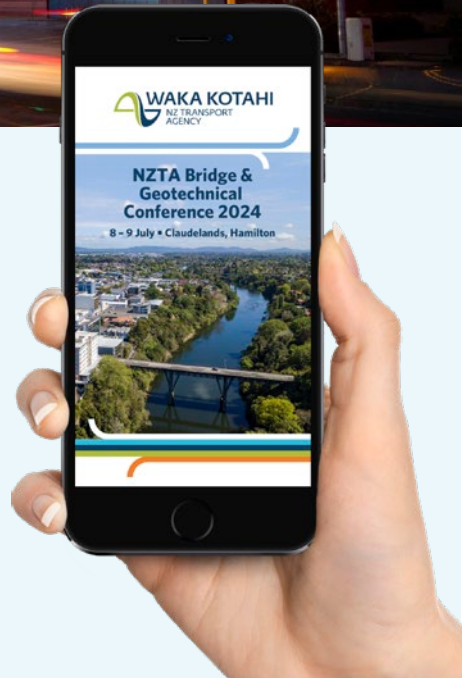
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Conference Committee

Moustafa Al-Ani

Lead Advisor Structures

New Zealand Transport Agency Waka Kotahi

Stuart Finlan

Lead Advisor Geotechnical

New Zealand Transport Agency Waka Kotahi

Special Dietary Requirements

If you indicated your dietary requirement during the online registration, this has been forwarded to the Claudelands caterers.

Depending on your requirement, the main food may be suitable for you or a separate table will have your food. Please make yourself known to the catering staff who will assist or please see the Registration Desk for assistance.

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