Wednesday, 15 October 2025

Pre-Symposium Workshops & Welcome Function

Time / Location	Description
08:30 – 17:00 Limelight Rooms Level 3	Earthworks: Theory to Practice **Dr Burt Look** NZ perspective presented by **Ayoub Riman**
08:30 – 17:00 Limelight Rooms Level 3	Slope Stability Guidance **Richard Justice, Eleni Gkeli, Razel Ramilo, Alan Wightman, Tom Revell, Naomi Norris** Sponsored by Natural Hazards Commission - Toka Tū Ake
09:00 – 16:00 Weke Room T&T Auckland	Rapid Building Assessment Training – geotechnical aspect **Rori Green and Jeremy Neven** Sponsored by Ministry of Business, Innovation and Employment
08:30 – 16:00 Parnell Cricket Club Remuera	In-situ Testing Practical Workshop **Robin Power and Dr David Lacey**
17:30 – 19:00 Wynyard Pavilion Wynard Quarter	**Welcome Function** Enjoy drinks, canapés, and great company as we kick off the Symposium with a relaxed networking reception.

For more details, please refer to the conference website.

Thursday, 16 October 2025

Symposium Day 1

Time / Location	Description			
07:30 Level 1	Registration Desk Open			
08:30 – 09:00 Hunua Rooms Level 1	Opening Ceremony **Emilia Stocks, 2025 Convenor and Philip Robins, NZGS Chair**			
09:00 – 09:45 Hunua Rooms Level 1	Earthquake- and Climate Change-Induced Cascading Hazards: Mechanism and Prediction **Keynote: Prof. Dr. Xuanmei Fan** Chaired by Emilia Stocks			
9:45 Hunua Rooms Level 1	New Zealand ShakeOut - Whakahaumaru Aotearoa			
09:50 – 10:10 Hunua Rooms Level 1	Auckland 2023 Storm Response: Successes, Challenges, and the Road to a Better Recovery **Ross Roberts** Chaired by Rajitha Subhasinghe (Sachi)			
10:15 – 10:45 Balcony Foyer Level 5	Morning Tea			
Presentation session 1	**1A: Earthquake Engineering, Liquefaction and SSI**	**1B: Slope Stability and landslide - Risk Assessment**	**1C: Embankments, dams and stopbanks**	**1D: Resilience in Transport Infrastructure**
10:45 – 12:25	Limelight Room Level 3	Waitākere Room 1 Level 4	Waitākere Room 2 Level 4	Waitākere Room 3 Level 4
Chaired by	**Rolando Orense**	**Alan Wightman**	**Richard Justice**	**Jin Lee**
10.45	**Introduction**			
10.48	Design of shallow foundations on soft lacustrine silt in Rotorua, New Zealand **Jared Flynn**	Landslide hazard and loss-of-life risk assessment for Muriwai, New Zealand following Cyclone Gabrielle in February 2023 **Matt Howard**	Back-analysis of hydraulic conductivity of coal mine spoil to ensure lowwall stability during dewatering **Jiwoo Ahn**	A simplified approach to regional storm recovery: Lower cost, higher risk tolerance, and reduced level of service on Marlborough roads **Dan Chamberose**
11.00	Design of foundations in lower seismicity liquefaction prone areas - a case study **Max McLean**	KiwiRail slope risk analysis (KRL) guidance review **Tom Revell**	Development of a hazard classification for reservoir landslides **Charlotte Parker**	Enhancing resilience of a critical State Highway route between Wellington and Hutt Valley through rockfall mitigation **Jayne Hodgkinson**

11.12	Rocking foundations: geotechnical considerations **Luke Storie**	Evaluating the risk of under-slips – A reflection on the assessment approach in Auckland **Luke Xu**	Learnings of large-scale bulk earthworks in Tauranga soils **Berrick Fitzsimons**	Enhancing Resilience: The Tar Barrel Tunnel Bypass for KiwiRail's Main North Line **Razel Ramilo** **Mark Dawson**
11.24	Proposed improvements to TS1170.5 seismic hazard estimates of PGA on soft-soil sites through rigorously considering the influence of soil nonlinearity **Chris de la Torre**	Risk assessment of high natural slopes in urban environments – the case of Napier Bluffs **Eleni Gkeli**	Numerical investigation on the period-dependent seismic amplification for embankment dams **Yu Wang**	Ten years of emergency response in the Eastern Bay of Plenty – An engineering geological journey through the roading network **Pedro Martins**
11.36	Foundation design for a clarifier at the Te Maunga Wastewater Treatment Plant; lessons of good practice in design and construction **Carlos Santamaria**	January 2023 Auckland Anniversary Weekend rainfall event – Lessons learnt from assessment and remediation of coastal cliff properties **Matthew Wansbone** **Nick Speight**	Simplified assessment procedure for stopbank seismic vulnerability and resilience **Jarrod Forde** **Saasha Marsters**	SH25A Taparahi bridge - Geotechnical challenges and solutions **Hayden Bowen**
11.48	Simplified CPT-based liquefaction ejecta severity model using Christchurch data **Kristian Azul**	Undertaking landslide risk assessment using AGS 2007 Guidelines – Interpretation and lessons learnt **Zhili Li** **Luke Xu**	Empirical fragility curves for stopbanks (Levees) from the 2010-2011 Canterbury Earthquake sequence **Yaseen Mahmood**	Geotechnical Design Philosophy for Highway Recovery following Cyclone Gabrielle **Paul Horrey**
12.00	Inertial and Kinematic Soil-structure Interaction Foundation Design of in Response to Seismic Events **Adam Beall**	Waikorora Bluffs Landslide - 48 Years of Monitoring and Management for the Maui Pipeline **Chris Foote**	Predicted and measured settlement of peat loaded by a reservoir **Titus Smith** **Chris Gilbert**	Design and construction of a 55m tall cut slope at Auraki Stream, State Highway 4 **Christoph Kraus**
12.12	Liquefaction Hazard Assessment of Pumice Rich Soils Case Study of Rangipo Substation **Sajjad Anwar**	Lessons from recent earthquakes for resilient design and management of slopes **Doug Mason**	Investigation of Fiber-Reinforced Soil Properties under Cyclic Strain-Controlled Conditions **Ismail Shah**	Tawhai Tunnel Lining Reinstatement **Fraser Monteith**
12:25 – 13:25 Balcony Foyer Level 5	**Lunch and Poster Session 1** Poster presenters (odd #'s to stand with posters 12:50-13:20)			
Presentation session 2	**2A: Lessons from Major Rainfall Events: Emergency Response and Recovery**	**2B: Earth Retaining Structures and Walls**	**2C: In-situ Testing and ground models**	**2D: Ground Improvement and piles design and constriction**
13:25 – 15:05	Limelight Room Level 3	Waitākere Room 1 Level 4	Waitākere Room 2 Level 4	Waitākere Room 3 Level 4
Chaired by	**Romy Ridl**	**Ayoub Riman**	**Heather Lyons**	**Naomi Norris**
13.25	**Introduction**			
13.28	Mulitaka Landslide, Enga Province, Papua New Guinea - Geotechnical USAR response from New Zealand **Jan Kupec & John Seward**	Low carbon retaining wall design: An assessment of whole-of-life embodied carbon for 500 real retaining walls in New Zealand **Nick Humphries**	Stormwater Soakage Testing and Design in New Zealand: An Inconsistent Practice **Chris Gilbert &** **Morris Kleinjan**	Challenges associated with the geotechnical design of Te Kaha – Canterbury's new Multi-Use Arena **Sam Baker**

13.40	Geohazard response on North Island transmission pipelines following 2023 extreme storm events **Cam Watson & Chris Foote**	Rock bags rock **Lars Schmidt**	Paleo-gully formation and impacts for ground modelling in Tauranga **Jeremy Eade**	Geotechnical challenges and solutions in reconstructing a bridge post-natural hazard events **Rhiannon Robinson**
13.52	Landslide susceptibility assessment of the Auckland Region to enhance future resilience **Doug Mason**	Improving the pseudo-static design of retaining walls: The influence of Vs30 and normalised average wall displacements **CY Chin**	Geotechnical Challenges on a Residential Land Development site in Te Puke North **Jamie Lott**	Integrating sustainability into foundation design: A case study of a low-carbon piling solution **Alistair Briffett & Scott Sunderland**
14.04	Redclyffe substation – A cost-effective, risk-based approach to geotechnical design challenges for post disaster critical infrastructure **Sam Glue**	Technical challenges: The Kāeo Bridge upgrade success story **Dan Sandilands & Kushant Kishore**	Estimation of soil modulus and friction angle for Temporary Gravel Platforms in New Zealand using the Plate Load Test **Nick Barounis**	Selection of the appropriate grillage construction methodology **Nick Wharmby**
14.16	Electrical resistivity tomography for screening landslide risk: A case study of Mangamuka Gorge **Lizzie Ingham**	Seismic earth pressures in 'c-Φ' materials: A comparative study of Mononobe-Okabe and alternative design approaches **Nick Clendon & Usama Fauzi**	Quantification of uncertainties associated with Vs30-based site classification **Liam Wotherspoon**	Ohinewai ground improvement – sleepyhead factory development **Nick Speight, Rayandra Putoa & Kieran Bursell**
14.28	The impact of geology and soil mechanics on landslides in the Kaimai Ranges **Kim De Graaf**	Specialty Remedial Grouting, Taupo Control Gate, Waikato River **Russell Denny**	Evaluation of bearing capacity and settlement of gravelly soils using the Chinese dynamic penetration test **Gabriele Chiaro**	Anchor load test results in Wellington soil and rock – an update **Alan Wightman**
14.40	Mitigation of slope risks along the Paekakariki Escarpment for the NIMT **David Stewart**	Under the mountain - City Rail Link, Mt Eden tunnel portal temporary retaining structure design and construction challenges **Yolanda Thorp & Simon Farquhar**	Pile integrity testing – with 'The Lot' please **Dion Denes**	Performance-based and whole-of-life design of the Kaitoke Flume Bridge **Ioannis Antonopoulos**
14.52	Identifying and forecasting movement patterns of large, populated landslides: A case study of the Tāhunanui Landslide **Katie Jones**	Port Hills loess - The challenge of identifying the good from the bad in Canterbury **Elliot Duke & Bjorn Raasch**	Quality control of large diameter bored piles using thermal Integrity profiling test **Mohammad Bagher Asadi**	Complexities for Large Diameter Pile Design in an Artesian Aquifer **Andrew Hills**
15:05 – 15:35 Balcony Foyer Level 5	**Afternoon Tea**			
15:40 – 16:25 Hunua Rooms Level 1	Engineering Uncertainty: The Struggle Between Facts and Beliefs in Geotechnics **Keynote: Dr Burt Look** Chaired by Martin Larisch			
16:25 – 17:25 Hunua Rooms Level 1	Engineering for a Sustainable and Resilient Future – online for public **Public Lecture: Prof. Jan Evans-Freeman** **Panelists: Prof. Jan Evans-Freeman, Jo Horrocks, Ross Roberts, Nick Wharmby** Chaired by Ann Wiliams			
18:30 Hunua Rooms Level 1	**Pre-Dinner Drinks**			
19:00 – 23:00 Hunua Rooms Level 1	**Gala Dinner and Awards**			

Friday, 17 October 2025

Symposium Day 2

Time/Location	Description
07:00 Level 1	Registration Desk Open
07:30 – 08:45 Hunua Rooms Level 1	**YGP breakfast followed by four presentations by the Best Paper winners of the NZGS YGP mini-Symposia** Presentations will start at 7:45 Cyclone Gabrielle: A Collaborative Approach to Reconnecting Communities - **Rebecca Till** Engineering Geological Modelling of an Active Landslide to Support Engineering Design - **João Pedro de Souza Oliveira** Moving Geotechnical Engineering Forward Together - **Jerry Lei** Analysis of Rockfall Fragmentation in the Torlesse Terrane Greywacke - **Dion Dow** Chaired by Christoph Kraus
09:00 – 09:10 Hunua Rooms Level 1	Day 2 Welcome **Emilia Stocks, 2025 Convenor**
09:10 – 09:55 Hunua Rooms Level 1	Liquefaction-Induced Downdrag and Dragload from Full-Scale Blast Liquefaction Testing **Keynote: Prof. Kyle M. Rollins** Chaired by Ioannis Antonopoulos
10:00 – 10:30 Balcony Foyer Level 5	**Morning Tea**
10:35 – 11:00 Hunua Rooms Level 1	Update on current and future MBIE projects **Kiran Saligame, Tim Farrant** Chaired by Philip Robins
11:00 – 12:30 Hunua Rooms Level 1	Geotechnical Design and Compliance: Making sense of the NZ Building Code, TS1170.5, and other guidance **Rick Wentz, Stuart Palmer, Ken Elwood, Kaley Crawford-Flett, Kiran Saligame** Chaired by Luke Storie
12:30 – 13:30 Balcony Foyer Level 5	**Lunch and Poster Session 2** Poster presenters (even #'s to stand with posters 12:55-13:25)

Presentation session 3	**3A: Volcanic Soils and Pumice**	**3B: Regulatory Practice, Risk, and Communication**	**3C: Machine Learning and Big Data Applications**
13:30 – 14:30	Waitākere Room 1 Level 4	Waitākere Room 2 Level 4	Waitākere Room 3 Level 4
Chaired by	**Mark Dawson**	**Roy Ching**	**Tom Revell**
13.30	**introduction**		

13.33	Estimation of pumice contents of volcanic deposits from their index properties **Mohammad Baqer Asadi**	Natural Hazards Risk Management Action Plan (NHRMAP) - a risk reduction tool for Auckland **Rebekah Mclelland & Florence Canal**	Integrating UAVs, automated construction monitoring, and real-time data analytics in embankment design and construction for the Mt Messenger Bypass **Dani Thompson, Razel Ramilo & Danny Beasant**
13.45	Cyclic behaviour and liquefaction potential of an italian volcanic soil through the energy-based approach **Rolando Orense**	Mangahauini Gorge - Development of a conceptual ground model from non-invasive data for decision making purposes **Rob Haskell & Caleb Gaston**	Making Auckland's roads more resilient: Using machine learning to model landslide risk and develop an adaptive resilience programme **Chris Armstrong & Stephen Parkes**
13.57	Determining the effectiveness of encased stone columns as a liquefaction mitigation in pumiceous sand by shake table testing **Balasubramanian Elankumaran**	Improving the Building Consent process: A case-study with Engineering New Zealand on geotechnical-related RFIs at Christchurch City Council **Marie-Claude Hébert**	A Comparison between Limiting Equilibrium and Finite Element Analyses in a Case Study Using Automation **Kelvin Lo**
14.09	Stormwater soakage rates in Taranaki Brown Ash **Matthew Sullivan-Brown**	Strategies for geotechnical risk management and claim prevention **Emilia Stocks & Ben Francis**	New Zealand Geotechnical Database (NZGD): Features & beyond for a nationally significant database **Tony Kao, Hayden Grant-Ussher, Kiran Saligame & Lucas Gordon**
14.21	Liquefaction assessment in pumiceous deposits - Guidelines to assist geotechnical engineers in selecting a suitable approach in design projects **Jordanka Chaneva**	Urban Development Impacts from Iron Pan Layers in Westport, New Zealand **Justin Lo**	
14:35 – 15:00 Balcony Foyer Level 5	Afternoon Tea		
15:00 – 16:00 Hunua Rooms Level 1	Mick Pender Memorial Session – A legacy of research, education and impact **Prof. Liam Wotherspoon, Prof. Rolando Orense, Andy O'Sullivan, Dr Mark Stringer, Dr Luke Storie** Chaired by Eleni Gkeli		
16:00 – 16:25 Hunua Rooms Level 1	Graduate Geotechnical Engineers and Engineering Geologists – a lack of apparent cohesion? **Ken Read** Chaired by Christoph Kraus Time for question with Geo-education Working Group (Eleni Gkeli, Christoph Kraus, Liam Wotherspoon, Martin Brook)		
16:25 – 16:35 Hunua Rooms Level 1	Update to the AGS 2007 Landslide Guidelines Review **Christoph Kraus, Ross Roberts**		
16:35 – 16:45 Hunua Rooms Level 1	Enabling you to make sustainability a reality in your geotechnical work - an NZGS supported initiative **Robin Power**		
16:45 – 17:00 Hunua Rooms Level 1	Closing Address **Emilia Stocks, 2025 Convenor**		

Saturday, 18 October 2025

Field Trips

Field Trip	Description
08:30 – 16:00	MAGMATIC MYSTERIES: The Secrets of Rangitoto
08:30 – 16:30	SLIP ‘N’ SLIDE: The Chronicles of Ground Movement

For more details, please refer to the conference website.

Poster Presentations

Poster sessions: presenters are asked to stand with posters in the second half of lunch to be available for questions and discussion. Odd numbered posters on Thursday (Session 1) and even numbered posters on Friday (Session 2).

#	Paper Title	Presenter
1	Review and certification of geosynthetic materials for Waka Kotahi roading projects	Paul Tan
2	Delayed onset of liquefaction in predicting lateral spreading using Newmark Sliding Block analysis	Rob Taylor
3	Single particle crushing test of pumice simulations using bonded element model in discrete element modelling	Denny Budiman
4	Providing New Zealand specific comment on the communication and management of geotechnical risk	Tom Palastanga
5	The power of conceptual models	Dan Sandilands
6	An epic tale of local expertise and collaboration in Tamatea/Central Hawke's Bay during the rapid rebuild following Cyclone Gabrielle	Joy Hoverd
7	Unsaturated soil mechanics in New Zealand: recent applications and advances	Katherine Yates
8	Changes in shear wave velocity of pumice sand before and after liquefaction	Keisuke Ishikawa
9	Not my Fault Avoidance Zone (FAZ)	Ryan Steadman
10	Geotechnical observations from the August 2022 Nelson rain event and consideration for debris barriers in an urban context	Clayton Freeman Markham Phillips
11	Regulation of liquefaction risk for residential land development in Auckland	Catherine Roh
12	2023 Auckland flood response: Rural road remediation and insights on integrated geotechnical and hydrological designs.	Nick Mellsop
13	Mitigating a complex landslide risk to the Puketeraki embankment on New Zealand's Main South Line north of Dunedin	Nima Taghipouran Janey Hansen
14	The importance of geotechnical coordination for modern developments – Insights from consulting and council	Matt Price Michael Sheridan
15	Determination of VS(30) and Site Class in accordance with TS 1170.5:2024 – A case study	Marco Holtrigter
16	Prediction of the one-dimensional heave of soil covering a wide range of soil expansivity and initial condition	Heba Elsaidy
17	Liquefaction characteristics of gravelly soils prepared by water sedimentation method	Linxuan Wang
18	Assessment of large-scale landslide susceptibility for the Auckland Region	Doug Mason Kuba Rozmus
19	Effect of carbon nanotubes on liquefaction resistance and shear strength of sand	S Shaswat
20	Transformative geoengineering solutions: Adapting to climate change and enhancing hazard resilience - A case study in Wellington, Eastbourne	Dani Thompson Adriana Garcia
21	Advanced barrier design: CMC-treated bentonite in GCLs for mitigating short-chain PFAS migration in landfills	Maryam Roshan Mooshaee Rolando Orense
22	Rapid response to weather damaged infrastructure in Manawatū	Will Conibear
23	The big picture of landslide databases in New Zealand	Enakshi Chakravorty
24	Rooting for stability: Integrating a softer touch to hard engineering for slope remediation	Kuanjin Lee
25	Liquefaction performance assessment for solar farms.	Lee Buhagiar
26	Reconstruction of Heaphy Track bridges following ex-Cyclone Dovi	Sarah Jones
27	Monitoring and Assessment of a Large Road Landslide near Martinborough, South Wairarapa	David Stewart
28	Liquefaction damage in Toyama Prefecture during the 2014 Noto Peninsula earthquake.	Taichi Hyodo
29	Groundwork for Resource Consents: Geotechnical Reporting Essentials for Auckland Development	Nicole Li
30	A scalable machine learning modelling tool for mapping landslide susceptibility across New Zealand	Alex Stokes
31	Development of Earthquake Shaking-Based Vulnerability Models for Residential Buildings on Hillslopes	Vinod Sadashiva Chris Massey

Thank you to our NZGS Members who reviewed the technical papers, including:

Clive Anderson	Matt Howard	Stuart Palmer
Kevin Anderson	Robert Kamuhangire	Razel Ramilo
Ioannis Antonopoulos	Leah King	Stuart Read
James Beaumont	Christoph Kraus	Nicola Ridgley
Hayden Bowen	Jan Kupec	Romy Ridl
James Burr	Andrew Langbein	Ross Roberts
Neil Charters	Martin Larisch	Kiran Saligame
C Y Chin	Dante Legaspi	Christopher Sandoval
Roy Ching	Don Macfarlane	Lars Schmidt
Sally Dallow	Stu Mason	Gordon Stevens
Elliot Duke	Trevor Matuschka	Emilia Stocks
Geoffrey Farquhar	Eli Maynard	Mark Stringer
Debbie Fellows	Max McLean	Harry Wahab
Stuart Finlan	Maxim Millen	Nick Wharmby
Paul Fletcher	David Milner	Hadley Wick
Ben Follett	Alexei Murashev	Alan Wightman
Marcus Gibson	Wataru Okada	Ann Williams
Eleni Gkeli	Rolly Orense	
Paul Horrey	Matt Packard	