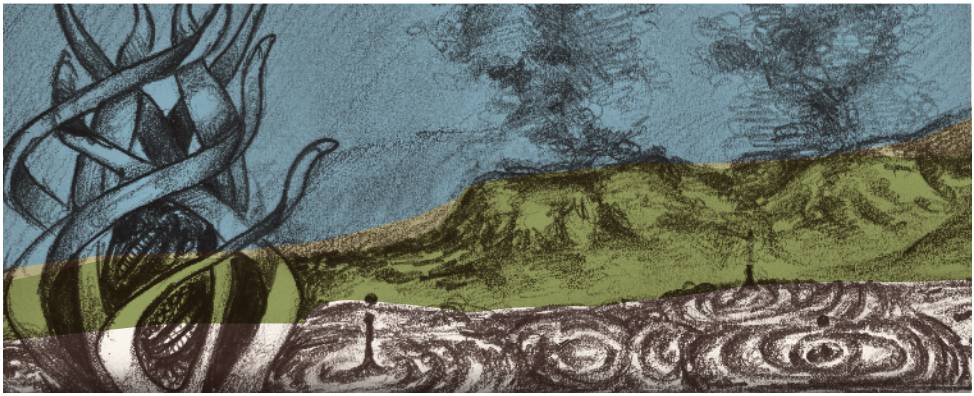
Geoscience Society of New Zealand

ANNUAL CONFERENCE 2026



Conference Programme



PLATINUM SPONSORS

Earth Sciences New Zealand Te Whatu Ao

TOI-OHOMAI Institute of Technology



Welcome to the GSNZ Annual Conference 2026

Tēnā tātou katoa,

We would like to welcome you to the 2026 Geoscience Society of New Zealand conference in Rotorua. This conference will be held in a uniquely dynamic geological environment, that is home to a wide array of natural geothermal features with deep links to iwi Māori, at an event that seeks to grow our understanding of the world around us and tackle ongoing challenges.

The conference will be hosted at the Rotorua Toi Ohomai campus from 30 November - 3 December. With a mix of oral and poster sessions, pre-conference workshops and field trips, this conference will be an exciting event for all. We will also ensure that another successful EarthFest event will be hosted alongside, to bring the community together to learn about the exciting Geoscience work currently underway.

Social functions will include an icebreaker event, gala dinner and less formal opportunities to engage, including an Early Career event.

A wide range of accommodation options are available in Rotorua with convenient public transport to the campus each day.

The local organising committee looks forward to seeing you all in Rotorua!

***Geoff Kilgour**, Conference Convenor*

***Catherine Reid**, President,*
Geoscience Society of New Zealand

LOCAL ORGANISING COMMITTEE

Anya Seward
Earth Sciences New Zealand

Catherine Reid
University of Canterbury

Craig Miller
Earth Sciences New Zealand

Geoff Kilgour
Earth Sciences New Zealand

Kelvin Tapuke
Massey University

Kyle Bland
Earth Sciences New Zealand

Marlena Prentice
University of Waikato

Matthew Sagar
Earth Sciences New Zealand

Paul White
Earth Sciences New Zealand

Sally Potter
Canary Innovation

Conference Organisers

conferences & events

Sponsors and Exhibitors

The conference organising committee acknowledges and thanks the following sponsors and exhibitors for their generous support and involvement in this conference. Their support has contributed towards our being able to provide a comprehensive programme of quality content and excellent value for all participants.

PLATINUM SPONSORS

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THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

TE KUNENGA KI PŪREHUROA
MASSEY UNIVERSITY
UNIVERSITY OF NEW ZEALAND

Plenary Speakers

Dr Isabelle Chambefort



Presentation Title: Geoshot New Zealand - Exploring the Deepheat of the Taupo Volcanic Zone (presenting with Rob Rankin)

Dr Isabelle Chambefort is General Manager - Energy at Earth Sciences New Zealand, a science strategist and energy leader dedicated to advancing multidisciplinary research that accelerates the energy transition, addresses New Zealand's energy challenges, and strengthens environmental resilience. With more than 20 years of expertise in hydrothermal systems, magmatic-hydrothermal ore deposits, and petrology, she is internationally recognised as a leading hydrothermal geoscientist.

Isabelle led the Endeavour programme *Geothermal: The Next Generation*, which concluded in 2025 and helped catalyse New Zealand's geothermal renaissance, including a $60 million investment in the GeoShot NZ superhot geothermal drilling programme. She currently serves as GeoShot NZ's Science Advisor and Geology Lead, and is Co-Programme Leader of the aligned Endeavour research programme *Deep Heat*.

Dr Georgia Grant



Presentation Title: Greenland and Antarctic Ice-sheet Contributions to Sea Level

Dr Georgia Grant is an Early Career Researcher and Sedimentologist at Earth Sciences New Zealand whose research explores how Antarctic and Greenland ice sheets have responded to past climate change and what that means for future sea-level rise. Using sediment records, geological archives, and astronomical climate cycles, she investigates the thresholds and feedbacks that drive ice-sheet change.

Georgia has participated in major international drilling programmes, including the recent SWAIS2C drilling project in West Antarctica and the IODP Expedition 400 to northwest Greenland. Her work has been published in journals including Nature and Nature Geoscience, has informed Antarctic ice-sheet modelling, and has been cited by the IPCC. She currently leads a Marsden Fast-Start project on Greenland and Antarctic ice-sheet contributions to sea level and holds leadership roles in several national and international science programmes.

Plenary Speakers

Rob Rankin



Presentation Title: Geoshot New Zealand - Exploring the Deepheat of the Taupo Volcanic Zone (presenting with Isabelle Chambefort)

Rob Rankin is a project delivery leader with deep expertise across the full geothermal value chain — from resource identification and project feasibility through well drilling, carbon capture, plant construction, and operations.

In his primary role as Head of Projects at Mercury NZ Ltd, Rob oversees all major capital works across nine hydro stations and five geothermal stations. He brings that same project leadership capability to his current secondment as Project Director of the Geothermal Superhot NZ Project (GeoShot), where he has been instrumental in assembling the team set to drill New Zealand's first superhot geothermal well in 2027.

Beyond geothermal, Rob's renewable energy experience spans wave, tidal, and hydro power — a breadth that reflects his identity as a project delivery leader in clean energy. He combines wide-ranging technical knowledge with sharp commercial acumen and a talent for building high-performing teams. It is this combination that allows Rob to navigate highly complex, first-of-kind projects and consistently deliver value at every stage.

Latasha (Tash) Wanoa



Presentation Title: Making the Complex Simple: Iwi Response in Emergencies

Latasha (Tash) Wanoa is a hazard and emergency management professional specialising in natural hazard resilience, climate adaptation, and community led approaches to risk reduction. Her work sits at the intersection of natural hazards, emergency management, and community resilience, with a focus on translating hazard information and risk into practical action.

Tash has experience supporting communities through hazard preparedness, response, recovery, and resilience initiatives, including work with Māori communities and locally led approaches to managing natural hazard and climate risks. She is passionate about strengthening the connection between scientific knowledge, mātauranga, and lived experience to support better decision making and build resilient communities across Te Tairawhiti. Tash is currently the Emergency Management and Recovery Lead for Te Runanganui o Ngati Porou, looking to lead the way for Emergency Management and Recovery systems and frameworks for Iwi Maori and PSGE's.

Public Talk:

Tuesday 2 December, 6pm - 7pm
Toi Ohomai, Mokoia Campus, L Block, Room L202

Brad Scott
Emeritus Volcanologist at Earth Sciences New Zealand



Presentation Title: Rotorua's explosive history and geothermal origins

Brad Scott has spent five decades visiting and monitoring our active volcanoes, and been lucky enough to be involved in eruption responses that have included Ngauruhoe in the 1970's to eruptions of Ruapehu in the 1970's and 80's then the major 1995-96 eruptions, Raoul in 2006 and Te Maari in 2012 and near-constant activity at Whakaari/White Island since 1976.

He began as a DSIR science cadet in 1973 and went on to build the monitoring network that now gives real-time data on New Zealand's volcanoes and formed the Volcano Monitoring Group, bringing scientists together to assess data and develop the concept of Volcano Advisory Groups to work with stakeholders. He helped design the Volcanic Alert Level systems (versions 2 and 3) used in NZ to describe the status of our active volcanoes.

Brad also has a strong interest in surface geothermal features and has actively contributed to many aspects of geothermal management plans that balance energy development against protecting natural features and establish monitoring regimes to quantify the health of the surface features. His fieldwork has taken him from Antarctica's Mount Erebus to volcanoes in Tonga, Papua New Guinea, Solomon Islands and Vanuatu - often in eruption response roles.

He is now officially retired but remains active in an emeritus role, mentoring the next generation of volcanologists and keeping watch over Rotorua, Taupō and Whakaari.

Conference Programme

Monday 30 November 2026

08.30 – 16.00	**Pre-conference Workshop: Whaka-papa. He aha te papa ki waenganui I what are the foundations between** **Leaders:** Jesse-James Pickery (Ngāpuhi), Brad Moggridge (Kamilaroi) and Georgia Grant	Toi Ohomai Institute of Technology, Mokoia Campus, L Block Room: L204
15.00 – 19.00	**Registration Desk Open**	Ground Floor, L Block
16.30 – 17.30	**Pōhiri** *(Meet in L Block foyer by registration desk at 4.30pm. Please arrive early, entry won't be permitted after the Pōhiri begins)*	Tangatarua Marae
17.30 – 19.00	**Icebreaker Reception** *(rsvp required)*	Ground Floor, L Block
19.00 – 21.00	**Early-Career Catch-Up** *(rsvp required) Please make your own way there.*	Good Eastern Taphouse

Tuesday 1 December 2026

08.00 – 17.30	**Registration Desk Open**		Toi Ohomai Institute of Technology, Mokoia Campus, L Block
08.45 – 09.30	**Mihi Whakatau** Kelvin Tapuke **Conference Opening** Rotorua Mayor Tania Tapsell Geoff Kilgour, Conference Convenor Catherine Reid, GSNZ President James Palmer, Chief Executive, Earth Sciences New Zealand		L202 (limited capacity) Overflow Room L204/L205
09.30 – 10.00	**Plenary Talk: Greenland and Antarctic ice-sheet contributions to sea level** *Georgia Grant, Earth Sciences New Zealand*		
10.00 – 10.30	**Morning Tea**		L Block
	L202	*L204/L205*	*L301/L302/L303*
10.30 – 12.00	**1A From Melt to Manifestation: Volcanism of Aotearoa and Beyond** *Chairs: Marlena Prentice, University of Waikato, Jenni Hopkins, Victoria University of Wellington, Anke Zernack, Massey University*	**1B Our changing landscapes; surface process dynamics, evolution, and hazards** *Chairs: Sam McColl, ESNZ, Shaun Eaves VUW, Katie Jones, ESNZ, David Barrell, ESNZ, Phaedra Upton, ESNZ, Sophie Horton, University of Canterbury, Jesse Kearse, Victoria University of Wellington*	**1C Geoeducation, geoheritage, and geoconservation. Earth Sciences outreach around the motu and beyond** *Chairs: Ilmars Gravis, Geoid SIG (GSNZ); The Geoconservation Trust Aotearoa Pacific, Katrin Wellnitz, OceanaGold New Zealand*
10.30 – 10.45	High resolution videography constrains causes of complex lava fountaining dynamics: at Kilauea volcano **Bruce Houghton, Earth Sciences New Zealand**	Precursor of a powerful large glacier landslide causing tsunami floods in the 26 August 2026 Nepal disaster **Wentao Yang, Beijing Forestry University**	Bridging the Gap: How Can ESSENZ and GSNZ Cultivate the Next Generation of Aotearoa Geoscientists **Justin Zani and Jim Critchley, Earth and Space Science Educators NZ**

** Student Presenter*

Conference Programme

TUESDAY CONTINUED

10.45 – 11.00	Three-dimensional approach to volcanic processes: A methodology in Dragonfly (ORS) **Shannen Mills, Massey University**	Impacts of Tropical Depression 5F in the north of the Gisborne/Tairawhiti Region **Murry Cave, Gisborne District Council**	Tūhono ngā Ākona ki te Pūatiao Papa- Connecting Māori students to Earth Science **Michael Smith, Massey University***
11.00 – 11.15	Toward forecasting gas-driven volcanic eruptions using integrated field data and modelling **Sophie Pearson-Grant, Earth Sciences New Zealand**	Weathering-Induced Slope Failure at the Makorori Landslide, Gisborne **Charlie Garcia Gil, University of Waikato***	Maunga-Led Geoeducation Research: Efforts to Enhance Students' Science Identity and Sense of Place around Ruapehu **Lais Camargo Novaes, University of Canterbury***
11.15 – 11.30	Insights into the volcanic-plutonic connection from glass-bearing plutonic clasts in the Ohakuri Ignimbrite, central Taupō Volcanic Zone **Sarah Smithies, University of Canterbury**	Land-use influences on landslide-driven sediment generation and delivery across three major storm events in the Mangaheia catchment, Tairāwhiti **Brenda Rosser, Earth Sciences New Zealand**	What I learnt from opening (and closing) a small, community-based, geology museum **Morne Wium, Mamlambo Fossils**
11.30 – 11.45	Elucidating the Enigmatic: A new geothermobarometer for investigating alkaline basalt magma storage depths **Rachael Baxter, University of Otago***	Landslide Risk Assessment Affecting Council Infrastructure Operation and Redevelopment **Kori Lentfer, CMW Geosciences**	Pestering the Public: A Case for Regional Geological Societies **Michele D'Ath-Woodd, SeisMomentum Limited**
11.45 – 12.00	To the solidus… and beyond!: Linking a subsolidus equation of state to a rhyolite-MELTS supersolidus equation of state **Liam Kelly, University of Canterbury**	Landslide mapping within Auckland's northern Future Urban Areas **Kyle Bland, Earth Sciences New Zealand**	Today's Mine, Tomorrow's Heritage **Katrin Wellnitz, Oceanagold NZ**
12.00 – 13.30	**Lunch**		L Block
12.30 – 13.30	**SIG Meeting** Room: G Block G201 **GeOID**	**SIG Meeting** Room: G Block G202 **GeoNet Programme Update**	**SIG Meeting** Room: G Block G203 **Energy**

** Student Presenter*

Conference Programme

TUESDAY CONTINUED

	L202	*L204/L205*	*L301/L302/L303*
13.30 – 14.45	**2A From Melt to Manifestation: Volcanism of Aotearoa and Beyond** *Chairs: Marlena Prentice, University of Waikato, Jenni Hopkins, Victoria University of Wellington, Anke Zernack, Massey University*	**2B Our changing landscapes; surface process dynamics, evolution, and hazards** *Chairs: Sam McColl, ESNZ, Shaun Eaves VUW, Katie Jones, ESNZ, David Barrell, ESNZ, Phaedra Upton, ESNZ, Sophie Horton, University of Canterbury, Jesse Kearse, Victoria University of Wellington*	**2C Making Sense and Managing Multiple Hazards across the Motu** *Chairs: Mary Anne Clive, ESNZ, Danielle Charlton, ESNZ, Victoria Miller, ESNZ, Lauren Vinnell, Joint Centre for Disaster Research*
13.30 – 13.45	**Keynote:** Ash on ice: a ~350 ka New Zealand super-eruption preserved in a deep Antarctic ice core **Anna Miller, Victoria University of Wellington***	Settlement performance of Rotorua Lake Sediments **David Gainsford, CMW Geosciences NZ Ltd**	Natural hazard risk perception and preparedness in a multi-hazard environment **Lauren Vinnell, Massey University**
13.45 – 14.00	Facies Architecture of the Taupō Ignimbrite; Deciphering Spatial Variations in Sedimentary Characteristics **Joseph Fleming, Massey University***	Extracting Fire Histories from Inland Dunes; A New Proxy of Environmental Change and Human Impact **Caeli Connolly, University of Canterbury***	Perceptions of multi-hazard risk, impact, and mitigation: the challenge of consistent language. **Emma Hudson-Doyle, Massey University**
14.00 – 14.15	Newly discovered pumice fall deposits on Tenerife, Canary Islands, reveal continuous felsic activity >540 – 169 Ka **Ethan Hamilton, Massey University***	Glacial geomorphology and sedimentology of the Poulter/ Waimakariri confluence **Tim Anderson, University of Canterbury***	Development of simulation exercises to strengthen geohazard response capability **Sam Wiffen, Earth Sciences New Zealand**
14.15 – 14.30	How long does it take to construct an andesitic cone? New Insights into Eruption Chronology and Magma Evolution from the Mangatawai Tephra Record **Brenda Ferguson, Victoria University of Wellington***	A Multiscale Framework for Quantifying Shore Platform Lowering Using Micro-Erosion Meter, Hierarchical Statistical Modelling, and Satellite Geodesy **Md Sakaouth Hossain, University of Otago***	Compounding rainfall-triggered sediment hazards from hillslope to floodplain **Sam McColl, Earth Sciences New Zealand**
		2B Our changing landscapes; Active Faults, Tectonics and Seismology Sub-Session	
14.30 – 14.45	A revised calendar date for the rhyolitic Kaharoa eruption, Mt Tarawera, North Island, New Zealand **David Lowe, University of Waikato**	Groundwater-driven surface uplift in Greater Osaka, Japan, mediated by crustal faults. **Jesse Kearse, Victoria University of Wellington**	Seismic-acoustic energy partitioning for mass-movement characterisation **Evie Senior, University of Canterbury***
14.45 – 15.00	**(Stretch/Toilet & Movement Break)**		

** Student Presenter*

Conference Programme

TUESDAY CONTINUED

	L202	*L204/L205*	*L301/L302/L303*
15.00 – 16.00	**3A From Melt to Manifestation: Volcanism of Aotearoa and Beyond** *Chairs: Marlena Prentice, University of Waikato, Jenni Hopkins, Victoria University of Wellington, Anke Zernack, Massey University*	**3B Our changing landscapes; Active Faults, Tectonics and Seismology Sub-Session** *Chairs: Sam McColl, ESNZ, Shaun Eaves VUW, Katie Jones, ESNZ, David Barrell, ESNZ, Phaedra Upton, ESNZ, Sophie Horton, University of Canterbury, Jesse Kearse, Victoria University of Wellington*	**3C Societal Risk, Resilience, and the Human Dimensions of Geoscience** *Chairs: Marion Tan, Massey University, Rebecca Fitzgerald, ESNZ, Sally Potter, Canary Innovation*
15.00 – 15.15	The crustal structure of the Auckland Volcanic Field **Kasper Van Wijk, University of Auckland**	Are the Driving Forces of Plate Tectonics Mechanically Complete? An Engineering Perspective **Tomasz Glowacki, Glowacki Consulting**	From information to action: A global review of public landslide preparedness and mitigation guidance **Sally Potter, Canary Innovation Limited**
15.15 – 15.30	Coupled thermo-fluid-mechanical modelling of magma recharge and reservoir deformation using Multiphysics **Mustafa Almassri, Massey University***	Preliminary findings from field-based investigations of the surface rupturing 2026 Amata earthquake, Central Australia. **Quinn McNab, University of Melbourne***	Utilising citizen science to understand tsunami evacuation behaviour for 2016 Kaikoura and 2021 East Cape earthquakes **Sajan Neupane, Joint Centre for Disaster Research***
15.30 – 15.45	Caldera-adjacent rift segments accommodate syn-eruptive fault rupture during the larger eruptions from Taupō volcano **Alex Gold, University of Auckland***	Insights into intraplate seismicity mechanisms using surface-wave tomography and thermography of eastern North America **Thomas Devenish Arzuza, Victoria University of Wellington***	Place, Participation, and the Co-design of School-Based Hazard Education **Marion Lara Tan, Joint Centre for Disaster Research**
15.45 – 16.00	Imaging Ōkataina volcano, Aotearoa New Zealand, with newly collected dense nodal seismic data **El Mestel, Victoria University of Wellington**	How Does Seismic Anisotropy Change with Slow Slip Events? **Aan Rahardji Puhi, Victoria University of Wellington***	Transforming Field Culture in the Geosciences: Insights from an AGU Survey and a New Training Program **Anne Gold, Victoria University of Wellington**
16.00 – 17.30	**Poster Session/ Afternoon Tea**		L Block
18.00 – 19.00	**Public Talk: Rotorua's explosive history and geothermal origins** **Brad Scott**, Emeritus Volcanologist at Earth Sciences New Zealand		L202

We recommend heading to 'Eat Streat' at the lake end of Tutanekai Street as a meeting point for dinner and evening socialising on Tuesday night.

** Student Presenter*

POSTERS

TUESDAY 1 DECEMBER

Poster Board	Poster Title	Session	Presenter
P1.01	A Hybrid Experiment to Image the Taupō Volcanic System with Distributed Acoustic Sensing and Seismic Nodes.	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Sara Klaasen, Australian National University
P1.02	Hidden unrest at Ruapehu: How seismic velocity changes highlight deformation beyond GNSS detectability	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Mustafa Almassri, Massey University
P1.03	New insights into the early eruptives of the Mangaone Subgroup, Ōkataina Volcanic Centre, New Zealand.	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Ryan Bailey, Massey University
P1.04	A reappraisal of the Early – mid Permian structural history of the southern Sydney Basin: ongoing volcanism and loading stresses from the southeasterly Gondwanan subduction.	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Glen Bann, Living Geodiversity
P1.05	Ashes to Answers, fingerprinting fragmentation in Hunga's ~1100 CE vs 2022 eruptions	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Rachel Baxter, University of Otago
P1.06	Reconstructing dome-building eruption sequences in the central Taupō Volcanic Zone: An insight into the Korotai pyroclastic deposits	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Taylor Dackers, University of Canterbury
P1.07	Thermomechanical modelling of segregation and rejuvenation in TVZ-like magmas	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	David Dempsey, University of Canterbury
P1.08	Reconstructing the magmatic system of the 298 ka Kaingaroa eruption using phase equilibrium geobarometry	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Oliver Eadie, University of Canterbury
P1.09	Magma-Fluid-Host Rock Interactions in the Ferrar Large Igneous Province, Antarctica	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Emily Froehlich, University of Auckland
P1.10	Crustal stress heterogeneity at volcanic centres in the Taupō Rift revealed through stress inversion of focal mechanisms: are volcanic centres a cause or a symptom?	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Alex S Gold, University of Auckland
P1.11	IntChron and TephraNZ, a plotting and data handling tool collaboration	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Jenni L Hopkins, Victoria University of Wellington
P1.12	Fault Scaling in Magma-rich Rifts	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Sophy Kipkwony, University of Auckland
P1.13	Tracking Tremor and Drumbeat Locations at Ruapehu volcano, Aotearoa New Zealand	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Oliver Lamb, Earth Sciences New Zealand - Te Whatu Ao
P1.14	Investigating the role of magmatic volatiles in magma-borehole encounters at Krafla and Námafjall, Iceland	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Jesse Martin, University of Canterbury

POSTERS

TUESDAY 1 DECEMBER

Poster Board	Poster Title	Session	Presenter
P1.15	Evolution of the Auckland Volcanic Field (New Zealand) boundary	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Craig Miller, Earth Sciences New Zealand
P1.16	When an isochronous tephra is not: the case of the Potaka tephra	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Anna Miller, Ministry of Business, Innovation And Employment
P1.17	Textural evolution of the ~232 CE Taupō eruption products	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Shannen Mills, Massey University
P1.18	Fault slip history of the Whakaipō Fault, Taupō Volcano	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Tegan Pegler, University of Auckland
P1.19	The Petrology and Geochemistry of Igneous Rocks found in the central portion of Tsezhin Bii/Hopi Buttes volcanic field, northeastern Arizona.	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Katherine Perry, University of Otago
P1.20	Basalt lava, hyaloclastite and a water-saturated environment combine to preserve 2.57 million-year-old wood at Te Mata, western North Island	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Adrian Pittari, University of Waikato
P1.21	Reconstructing the volcanic evolution of Rapa Nui (Easter Island) from the seafloor to the subaerial edifice	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Maria Puentes, Massey University
P1.22	Deep mantle structure suggests high temperatures and possibly rising mantle flow under northwestern New Zealand	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Martha Savage, Victoria University of Wellington
P1.23	High resolution study of the complex effusive-explosive small-scale Ātiamuri eruption in the central Taupō Volcanic Zone	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Sarah Smithies, University of Canterbury
P1.24	Automated Detection and Characterisation of Low-Frequency Seismicity as a Window into Volcanic Processes in Aotearoa New Zealand	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Miranda Smith-Polette, Victoria University of Wellington
P1.25	Quantifying corrosion in volcanic ash and gas environments	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Kelvin Tapuke, Massey University
P1.26	Ocean-rafted pumice in New Zealand as a proxy for reconstructing eruption records in the Southwest Pacific – A pilot study	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Anke Zernack, Massey University
P1.27	Mechanically consistent model of volcanic seismicity in response to propagating dyke	From Melt to Manifestation: Volcanism of Aotearoa and Beyond	Vladimir Lyakhovsky, Geological Survey Israel

POSTERS

TUESDAY 1 DECEMBER

Poster Board	Poster Title	Session	Presenter
P1.28	School education for natural hazards and risk: lessons from a Tairāwhiti landslide context	Geoeducation, geoheritage, and geoconservation. Earth Sciences outreach around the motu and beyond	Kelvin Tapuke, Massey University
P1.29	Te Tūkohu Ngāwhā: the evolution of a Mātauranga-based Science Fair	Geoeducation, geoheritage, and geoconservation. Earth Sciences outreach around the motu and beyond	AJ Marshall, Victoria University of Wellington
P1.30	Why the Kaimanawa Wall is a man-made feature	Geoeducation, geoheritage, and geoconservation. Earth Sciences outreach around the motu and beyond	Bruce Hayward, Geomarine Research
P1.31	Snow geochemical survey as the best method for assessing air quality in winter regions.	Geoeducation, geoheritage, and geoconservation. Earth Sciences outreach around the motu and beyond	Olga Kachor, Irkutsk National Research Technical University
P1.32	A study of the of natural variability of hydrogeochemical parameters of Lake Baikal (UNESCO Heritage) as a long-term basis for environmental training of geology students	Geoeducation, geoheritage, and geoconservation. Earth Sciences outreach around the motu and beyond	Alexander Parshin, Irkutsk National Research Technical University
P1.33	Visible Geology in a first-year geological mapping laboratory: Evaluation of implementation and student outcomes	Geoeducation, geoheritage, and geoconservation. Earth Sciences outreach around the motu and beyond	Kate Pedley, University of Canterbury
P1.34	The UC Earth Science Garden: Where to next?	Geoeducation, geoheritage, and geoconservation. Earth Sciences outreach around the motu and beyond	Kate Pedley, University of Canterbury
P1.50	Shallow Shear-Wave Structure Revealed by Dense SAHKE Arrays Across the Southern North Island, New Zealand	Making Sense and Managing Multiple Hazards across the Motu	Shao-jinn Chin, Victoria University of Wellington
P1.51	The Multi-Hazard Warning Challenge: Integrating Science, Communication, and Decision-Making	Making Sense and Managing Multiple Hazards across the Motu	Sara Harrison, Earth Sciences New Zealand
P1.52	Understanding the implementation pathway: Integrating user feedback into the design for volcanic ash forecasting tools	Making Sense and Managing Multiple Hazards across the Motu	Victoria Miller, Earth Sciences New Zealand
P1.53	Rapid Analysis of Volcanic Plume Height Eruption Source Parameter using fixed cameras	Making Sense and Managing Multiple Hazards across the Motu	Stuart Waring, Earth Sciences NZ
P1.54	Where is the Alpine Fault Locked? GNSS analysis of late interseismic deformation across the Alpine Fault	Our changing landscapes; surface process dynamics, evolution, and hazards.	Danielle Best, Victoria University of Wellington

POSTERS

TUESDAY 1 DECEMBER

Poster Board	Poster Title	Session	Presenter
P1.55	From Information Overload to Insight: Automation and unified dashboards for geohazard response and BAU at NGMC	Making Sense and Managing Multiple Hazards across the Motu	Stuart Waring, Earth Sciences New Zealand
P1.56	Road Construction Through a Caldera Rim	Our changing landscapes; surface process dynamics, evolution, and hazards.	Terry Boyle, ESNZ
P1.57	Characteristics and evolution of a volcaniclastic fluvial-lacustrine system in the Hamilton lowlands, New Zealand.	Our changing landscapes; surface process dynamics, evolution, and hazards.	Christine Burchell, University of Waikato
P1.58	A High-Resolution Analysis of Geomorphic Controls on Deposition during the March 2007 Ruapehu Lahar.	Our changing landscapes; surface process dynamics, evolution, and hazards.	Rachel Clark, Massey University
P1.59	Ostler Quakes network observes seismicity for inferring deep fault structure relative to active mapped faults	Our changing landscapes; surface process dynamics, evolution, and hazards.	Donna Eberhart-Phillips, ESNZ
P1.60	Displacement rates and earthquake prehistory of the Ostler fault, Mackenzie Basin, Aotearoa	Our changing landscapes; surface process dynamics, evolution, and hazards.	Campbell Hall, University of Canterbury
P1.61	Constraining prehistoric rock avalanche occurrence using paired 10Be/36Cl cosmogenic surface exposure dating in New Zealand greywacke	Our changing landscapes; surface process dynamics, evolution, and hazards.	David Hobbis, Te Herenga Waka - Victoria University of Wellington
P1.62	An initial assessment of the temporal variability of the Sri Lankan geodetic reference frame	Our changing landscapes; surface process dynamics, evolution, and hazards.	Kahatagahadiwela Gedara Lakshika Chathumali Kahatagahadiwela, University of Otago
P1.63	Characterising Microseismicity Across Locking Boundaries of the Hikurangi Subduction Zone:	Our changing landscapes; surface process dynamics, evolution, and hazards.	Fernando Sanchez Alonso, Victoria University of Wellington
P1.64	The Late Quaternary geometry and displacement of the Molesworth section of the Awatere Fault	Our changing landscapes; surface process dynamics, evolution, and hazards.	Benjamin Souter, University of Canterbury
P1.65	Transforming lakes into natural seismometers by combining fibre-optic seismology and slope stability modelling	Our changing landscapes; surface process dynamics, evolution, and hazards.	Katleen Wils, Te Herenga Waka - Victoria University of Wellington
P1.66	Enhancing Indicator-Based Multidimensional Landslide Vulnerability Assessment Through People's Perception	Societal Risk, Resilience, and the Human Dimensions of Geoscience	Jayaprakash Selvarajah, Massey University

Conference Programme

Wednesday 2 December 2026

08.00 – 18.00	Registration Desk Open		Toi Ohomai Institute of Technology
09.00 – 09.25	Plenary Talk – **Latasha Wanoa**, Te Runanganui o Ngati Porou *Making the complex simple: Iwi response in emergencies*		L202 (limited capacity) Overflow Room L204/L205
09.25 – 09.30	**Move rooms**		
	L202	*L204/L205*	*L301/L302/L303*
09.30 – 10.00	**4A Carbon in the Environment** *Chairs: Greer Gilmer, ESNZ, Scott Nodder, ESNZ, Lorna Strachan, University of Auckland*	**4B Geological maps and mapping – advances and opportunities** *Chairs: Oliver Mcleod, Waikato Regional Council, Mark Rattenbury, ESNZ, Dougal Townsend, ESNZ, Matt Sagar, ESNZ*	**4C Te Ao Māori: Māori worldview and practices on whenua, moana** *Chairs: Oliver McLeod, Waikato Regional Council, Wiremu Puke, Ngāti Wairere*
09.30 – 09.45	Experimental Investigation of Temperature-Dependent CO_2 Mineralization in Epidote-Bearing Silicic Geothermal Reservoirs of the Taupō Volcanic Zone, New Zealand **Curt Knott, University of Auckland***	**Keynote:** The new Geology of The Taupō Volcanic Zone 1:130,000 map and bulletin **Graham Leonard, Earth Sciences New Zealand**	Integrating Mātauranga Māori, ethnography, and geoscience to identify sources and functions of stone tools including toki (adzes): a case study from Ōtorohanga Museum **Wiremu Puke, University of Waikato**
09.45 – 10.00	Future perturbations of atmospheric chemistry by Pinus radiata – why silvicultural carbon sequestration will exacerbate emissions problems and climate change **Nicholas Powell, Forensic & Industrial Science Limited**	Advances in geological mapping and the geological map product **Mark Rattenbury, Earth Sciences New Zealand**	Understanding Te Puia o Whakaari – Bridging Mātauranga Māori and Western Science to Create Integrated Educational Resources for Tamariki **Ashlee Sturme and Victoria Miller, Earth Sciences New Zealand**
10.00 – 10.15	Catching Marine Carbon: Using natural analogues to investigate Carbon Dioxide Removal approaches in Aotearoa New Zealand **Scott Nodder, Earth Sciences New Zealand**	Creating a geological database for community benefit, Gisborne-Tairawhiti **Colin Mazengarb, Retired Private Researcher**	**Lunchtime Demonstration from 12pm in L Block Foyer:** Wiremu Puke (Ngāti Wairere) will demonstrate how ōnewa (greywacke) and karā (basalt) are flaked to produce pre-forms for adze making in the traditional style of his Tainui iwi.
10.15 – 10.45	**Morning Tea**		L Block

** Student Presenter*

Conference Programme WEDNESDAY CONTINUED

	L202	*L204/L205*	*L301/L302/L303*
10.45 – 12.00	**5A Carbon in the Environment** *Chairs: Greer Gilmer, ESNZ, Scott Nodder, ESNZ, Lorna Strachan, University of Auckland*	**5B Geological maps and mapping – advances and opportunities** *Chairs: Oliver Mcleod, Waikato Regional Council, Mark Rattenbury, ESNZ, Dougal Townsend, ESNZ, Matt Sagar, ESNZ*	**5C Bridging Geoscience Models and Decision-Making: Evaluating, Understanding, and Communicating Models, Forecasts, and Scenarios** *Chairs: Emma Hudson-doyle, JCDR, Massey University, Danielle Charlton, ESNZ*
10.45 – 11.00	Transfer efficiency of organic carbon in marine sediments of the Hauraki Gulf **Li Liu, University of Auckland***	Towards well-informed landforms – development of a standardised classification of terms and definitions for geomorphological mapping in Aotearoa New Zealand. **Angela Griffin, Earth Sciences New Zealand**	National 3D facies model for New Zealand: application to shallow groundwater hazard forecasting in the Auckland isthmus **Paul White, Earth Sciences New Zealand**
11.00 – 11.15	Exploring the long-term fate of organic carbon exported from Aotearoa New Zealand fjords **Cathy Ginnane, Earth Sciences New Zealand**	3D Volcano Terrain Models **James Ford, Obsidian Cartography**	Co-designing rainfall-induced landslide forecasts for Aotearoa New Zealand **Sally Potter, Canary Innovation**
11.15 – 11.30	Estimating terrestrial organic carbon lateral transport and consumption using radiocarbon in DIC **Christian Lewis, Earth Sciences New Zealand**	Establishing regional Quaternary stratigraphic terminologies to support detailed geological work in Aotearoa New Zealand **David Barrell, Earth Sciences New Zealand**	Geotechnical decision-making for resilient water storage in Hamilton: from site optioneering to rigid inclusions **Hai An Nguyen Bui, CMW Geosciences**
11.30 – 11.45	Environmental magnetism as a redox proxy, patea/Doubtful Sound, Fiordland, New Zealand: implications for carbon sequestration **Alana French, University of Otago***	Mapping the offshore volcanic landscape of the Auckland Province **Oliver McLeod, Waikato Regional Council**	Towards a Modern Deformation Model for New Zealand: Insights from Nine Years of InSAR Observations. **Lars Hansen, Toitū Te Whenua Land Information New Zealand**
11.45 – 12.00	Late Holocene carbon burial in Fiordland marine basins **Greer Gilmer, Earth Sciences New Zealand**		Evaluating a Bayesian network forecast for highway closure decisions at the Kauaeranga Spillway **Annemarie Christophersen, Earth Sciences New Zealand**
12.00 – 13.30	**Lunch** **Lunchtime Demonstration:** Wiremu Puke (Ngāti Wairere) will demonstrate how ōnewa (greywacke) and karā (basalt) are flaked to produce pre-forms for adze making in the traditional style of his Tainui iwi.		L Block

** Student Presenter*

Conference Programme WEDNESDAY CONTINUED

12.30 – 13.30	**SIG Meeting** Room: G Block G201 **Seismology**	**SIG Meeting** Room: G Block G202 **LAVA NZ (volcanology)**	**SIG Meeting** Room: L204/L205 **Paleontology**
	L202	*L204/L205*	*L301/L302/L303*
13.30 – 15.00	**6A 10 years since the Kaikōura earthquake – lessons learned from a large mult-fault earthquake** *Chairs: Robert Langridge, ESNZ, Camilla Penney, University of Canterbury, Jesse Kearse, Victoria University of Wellington*	**6B Marine geosciences, from coast to ocean** *Chairs: Marta Ribó, Auckland University Of Technology (aut), Dr Sally Watson, ESNZ, Dr Alan Orpin, ESNZ*	**6C Bridging Geoscience Models and Decision-Making: Evaluating, Understanding, and Communicating Models, Forecasts, and Scenarios** *Chairs: Emma Hudson-doyle, JCDR, Massey University, Danielle Charlton, ESNZ*
13.30 – 13.45	Advances in rapid characterization of local earthquakes and tsunami: From the 2016 Kaikōura earthquake to now and beyond **Anna Kaiser, Earth Sciences New Zealand**	New estimates of upper-plate faulting and folding accommodating tectonic shortening at the south-central Hikurangi margin, New Zealand **Luisa Rollwage, University of Canterbury***	From Forecast to Action: Designing Time-Dependent Tsunami Forecasts for Emergency Decision-Making **Sara Harrison, Earth Sciences New Zealand**
13.45 – 14.00	Earthquake interactions on the Marlborough Fault System before the 2016 Kaikōura earthquake. **Calum Chamberlain, Victoria University of Wellington**	SEAFAULT: Seismic Imaging of Active Fault Connectivity and Segmentation across Cook Strait, Aotearoa New Zealand **Fynn Warnke, Earth Sciences New Zealand**	Interpreting Landslide Susceptibility in Practice: Stakeholder Perspectives from New Zealand **Anish Kanal, Massey University***
14.00 – 14.15	The Earthquake-Induced Landscape Dynamics Endeavour Programme: Recap, Findings and Future Directions from the 2016 Kaikōura Earthquake **Katie Jones, Earth Sciences New Zealand**	Geospatial classifications and benthic geomorphology across Manukau Harbour based on hydrographic survey AU441 **Sam Davidson, Earth Sciences New Zealand**	Hawke's Bay Soil Conservation Modelling: A case study in avoided cost. **Ashton Eaves, HBRC**
14.15 – 14.30	Pseudodynamic Modeling of Multifault Ruptures: The 2016 Mw 7.8 Kaikoura Earthquake **Kiran Kumar and Singh Thingbaijam, Earth Sciences New Zealand**	A semi-restricted volcanic basin: evidence of deep-water isolation and exchange processes at Hunga volcano **Hannah St. Louis, Auckland University of Technology***	Short-term eruption forecasting using global monitoring data **Eleanor Tennant, Massey University**

** Student Presenter*

Conference Programme WEDNESDAY CONTINUED

14.30 – 14.45	Using a targeted seismic array and machine learning to illuminate the Marlborough Fault System's deep structure **Carlos Montalvo Lara, Victoria University of Wellington***	Examining the Impact of Coastal Volcanoes in the Marine Environment: A Study of the 2008 Chaitén Eruption, Chile. **Jack Crichton, University of Auckland***	Supporting decision-making in a volcanic crisis: A community approach to developing an unrest model for Taupō volcano **Annemarie Christophersen, Earth Sciences New Zealand**
14.45 – 15.00	Small on-fault lakes as multi-millennial sedimentary archives of surface rupturing earthquakes on the Hope Fault **Markus Niederstätter, Victoria University of Wellington***	The Rewa River-Suva Canyon-Kadavu Passage sedimentary system in Fiji **Jacobo Martin De Nascimento, University of the Southern Pacific**	Mapping natural hazards for public understanding: current lessons from the Natural Hazards Portal **Tabitha Bushell, Natural Hazards Commission**
15.00 – 16.30	**Poster Session/ Afternoon Tea**		L Block
16.30 – 17.30	**GSNZ AGM**		L204/L205
18.45 – Late	**'Thermal Tropicana BBQ' Dinner & Awards** *(rsvp required) Awards will be presented at the start of the evening, don't be late!*		Toi Ohomai Institute of Technology

** Student Presenter*

POSTERS

WEDNESDAY 2 DECEMBER

Poster Board	Poster Title	Session	Presenter
P2.01	A record of the 2016 Kaikōura tsunami in Porirua raises questions about its source mechanisms and location	10 years since the Kaikōura earthquake – lessons learned from a large multi-fault earthquake	Jean Roger, Earth Sciences New Zealand
P2.02	A spatio-temporal deep learning framework for real-time fault rupture mapping	10 years since the Kaikōura earthquake – lessons learned from a large multi-fault earthquake	Florent Aden-Antoniow, Earth Sciences New Zealand
P2.03	Calibrating fault rupture signatures in on-fault lakes using the 1888 Amuri Earthquake	10 years since the Kaikōura earthquake – lessons learned from a large multi-fault earthquake	Luke Chowdhury, Te Herenga Waka — Victoria University of Wellington
P2.04	Earthquake Triggering in the North Island of New Zealand following the Kaikōura Earthquake.	10 years since the Kaikōura earthquake – lessons learned from a large multi-fault earthquake	Codee-Leigh Williams, Te Herenga Waka Victoria University of Wellington
P2.05	Evidence for past 'Kaikōura-type' multi-fault earthquakes from terrace uplift, incision & avulsion records across the Papatea block, NZ	10 years since the Kaikōura earthquake – lessons learned from a large multi-fault earthquake	Robert Langridge, Earth Sciences New Zealand
P2.06	How does Wellington's complex faulting and thermal structure impact seismogenesis?	10 years since the Kaikōura earthquake – lessons learned from a large multi-fault earthquake	Samantha Nicholson, Te Herenga Waka - Victoria University of Wellington
P2.07	Near-field tracking of large earthquakes using CCTV footage.	10 years since the Kaikōura earthquake – lessons learned from a large multi-fault earthquake	Jesse Kearse, Victoria University of Wellington
P2.08	Testing New Zealand's Rapid Earthquake Response Tools with Complex Multi-Fault Ruptures	10 years since the Kaikōura earthquake – lessons learned from a large multi-fault earthquake	Jen Andrews, Earth Sciences New Zealand
P2.09	The Dunstan Fault, Central Otago: Which trace will rupture next?	10 years since the Kaikōura earthquake – lessons learned from a large multi-fault earthquake	Alex Travers, University of Otago
P2.10	Updated coseismic deformation field of the 2016 Kaikōura Earthquake using multi-sensor InSAR data	10 years since the Kaikōura earthquake – lessons learned from a large multi-fault earthquake	Hassan Aleem, Victoria University of Wellington
P2.11	A review of spatial machine learning techniques relevant to epithermal gold prospecting in New Zealand	Artificial intelligence in geosciences	Roman Okhrimchuk, University of Canterbury
P2.12	A Recognition-assisted Camera for Automated Microscopy (RaCAM) applied to geoscience studies.	Artificial intelligence in geosciences	Martin Tetard, Earth Sciences New Zealand

POSTERS

WEDNESDAY 2 DECEMBER

Poster Board	Poster Title	Session	Presenter
P2.13	Beyond Vibe Coding: Developing the Solarium 3D Seismic Platform with Claude	Artificial intelligence in geosciences	Steve Morice, Seismomentum Ltd
P2.14	Diffusion-Based Machine Learning for Clustering Earthquakes in the Taupō Volcanic Zone	Artificial intelligence in geosciences	Emily Huber, Victoria University of Wellington
P2.15	Machine and deep learning prediction of missing sonic log data with blind-well validation	Artificial intelligence in geosciences	Shervin Bahramali Asadi Kelishami, The University of Waikato
P2.16	Stress and locking of the Puysegur Subduction Zone: observations from over 30,000 earthquakes and outstanding questions	Artificial intelligence in geosciences	Calum Chamberlain, Te Herenga Waka - Victoria University of Wellington
P2.17	Surrogate-Assisted Optimization for Geothermal Reservoir Model Development.	Artificial intelligence in geosciences	Sapi Karalliyadda, Earth Sciences New Zealand
P2.18	Sliding Lands, Solid Decisions: Integrating landslide hazard and risk information into practice.	Bridging Geoscience Models and Decision-Making: Evaluating, Understanding, and Communicating Models, Forecasts, and Scenarios	Emma Hudson-doyle, JCDR, Massey University
P2.19	Co-designing rainfall-induced landslide forecasts for Aotearoa New Zealand	Bridging Geoscience Models and Decision-Making: Evaluating, Understanding, and Communicating Models, Forecasts, and Scenarios	Sally Potter, Canary Innovation Ltd
P2.20	Supporting geoscience decision-making under uncertainty: Bayesian networks and a global community of practice	Bridging Geoscience Models and Decision-Making: Evaluating, Understanding, and Communicating Models, Forecasts, and Scenarios	Annemarie Christophersen, Earth Sciences New Zealand
P2.21	An Updated 3D Regional Basement Model of the Taupō Volcanic Zone, New Zealand	Geothermal Aotearoa: Science, Energy, Community and Environment	Lucy Carson, Earth Sciences New Zealand
P2.22	Baseline CO2 diffuse degassing and heat flux budgets for Paka geothermal field using ground- and remote-sensed measurements	Geothermal Aotearoa: Science, Energy, Community and Environment	Emmanuel Turinimana, University of Auckland
P2.23	Characterising the Brittle-Ductile Transition Beneath the Rotokawa Geothermal Field Using Joint Seismic and Magnetotelluric Interpretation	Geothermal Aotearoa: Science, Energy, Community and Environment	Julia Berglind, Victoria University of Wellington
P2.24	Controls on Gallium as a Biosignature: Insights from Icelandic Hot Springs	Geothermal Aotearoa: Science, Energy, Community and Environment	Sophie Bialostocki, University of Auckland

POSTERS

WEDNESDAY 2 DECEMBER

Poster Board	Poster Title	Session	Presenter
P2.25	Developing Distributed Acoustic Sensing (DAS) Methodologies for Noisy Geothermal Environments to Characterize the Brittle-Ductile Transition Zone.	Geothermal Aotearoa: Science, Energy, Community and Environment	Joel Beltran Gracia, Victoria University of Wellington
P2.26	Modelling the Signatures of Supercritical Geothermal Resources under Thermally-Inhibited Permeability Constraints	Geothermal Aotearoa: Science, Energy, Community and Environment	Dona Banerjee and David Dempsey, University of Canterbury
P2.27	Seismic attenuation informs the presence of melt and fluids under the southern Central TVZ (Taupō-Reporoa)	Geothermal Aotearoa: Science, Energy, Community and Environment	Sandra Bourguignon, Earth Sciences New Zealand
P2.28	Whitford Geothermal System, Auckland: Evidence for Extension into Flat Bush	Geothermal Aotearoa: Science, Energy, Community and Environment	Paul Viskovic, Earth Sciences New Zealand
P2.29	Following the Clues: Analytical Facilities Supporting Geothermal Science at Earth Sciences New Zealand, Te Whatu Ao	Geothermal Aotearoa: Science, Energy, Community and Environment	Phoebe Tio, Earth Sciences New Zealand
P2.30	Modelling wellbore scaling in geothermal systems using a coupled hydrodynamic--geochemical simulator	Geothermal Aotearoa: Science, Energy, Community and Environment	Oleg Melnik, University of Oxford
P2.31	A Late Quaternary Reconstruction of the Sedimentary Processes and Environments associated with the Rapanui Formation at Waiau Stream, Taranaki	Marine geosciences, from coast to ocean	Nancy Huang, University of Auckland
P2.33	Daily seabed mobility from repeat multibeam surveys in Cook Strait/Te Moana o Raukawakawa	Marine geosciences, from coast to ocean	Sally Watson, ESNZ/ University of Auckland
P2.34	Grain by grain: a history of ice rafting debris from northwest Greenland during the Cenozoic	Marine geosciences, from coast to ocean	Georgia Grant, Earth Sciences New Zealand
P2.35	Shallow Seafloor Seeps Around Aotearoa New Zealand: Distribution, Morphology and Controls	Marine geosciences, from coast to ocean	Susi Woelz, Earth Sciences New Zealand
P2.36	Shifting Sands	Marine geosciences, from coast to ocean	Harper Spurway, Avondale College
P2.37	Terrestrial runoff and impacts on coral reefs: Northwest Borneo, Malaysia	Marine geosciences, from coast to ocean	Md Sakaouth Hossain, University of Otago

POSTERS

WEDNESDAY 2 DECEMBER

Poster Board	Poster Title	Session	Presenter
P2.38	The Sloggett Canyon, a major pathway for offshore export of terrigenous sediments across the continental margin of Southern Patagonia	Marine geosciences, from coast to ocean	Jacobo Martin De Nascimento, The University of the South Pacific
P2.39	Tracking the disturbance of seabed during anchoring operations	Marine geosciences, from coast to ocean	Marta Ribo, Auckland University of Technology (AUT)
P2.40	Quantitative Palaeoecology and Palaeoenvironmental Reconstruction of the Late Cretaceous-Paleogene Succession in the Amama-1 and Bara-1 Wells Anambra Basin, Nigeria	Paleontology across the spectrum - big and small, young and old	Joy Obiageli Njoku, Federal University of Technology Owerri
P2.41	Southern Ocean Microfossils: An Archive of Micronutrient Availability Through the Last Deglaciation	Paleontology across the spectrum - big and small, young and old	Hannah Whelan, University of Otago
P2.42	Why Collections Matter	Paleontology across the spectrum - big and small, young and old	Marianna Terezow, Earth Sciences New Zealand
P2.43	Building a facies framework to examine the type and distribution of organic matter in potential underground hydrogen storage site in the Taranaki Basin	Powering the future: geoscience for New Zealand's energy transition	Ted Spinks, University of Canterbury
P2.44	Framboidal Pyrite Reactivity in Pohokura Caprock: An Experimental Batch-Reaction Study of Hydrogen-Brine-Rock Interactions	Powering the future: geoscience for New Zealand's energy transition	Thomas Gunnell, University of Auckland
P2.45	Helium Enrichment Patterns in Coal Measures of the Qinshui Basin, China	Powering the future: geoscience for New Zealand's energy transition	Tianshu YUAN, China University of Geosciences
P2.46	Natural hydrogen systems in Aotearoa New Zealand – a potential sovereign, low-cost, low-carbon energy future?	Powering the future: geoscience for New Zealand's energy transition	Janina Gillies, University of Canterbury
P2.47	The mineralogical changes of carbonate rocks induced by hydrogen	Powering the future: geoscience for New Zealand's energy transition	Miss Tabbie Porter, University of Auckland
P2.48	The role of Geoheat in New Zealand's Energy future	Powering the future: geoscience for New Zealand's energy transition	Anya Seward, Earth Sciences New Zealand
P2.49	Thermodynamic Modeling of CO_2–H_2O Mixtures in Geothermal Reservoirs Using a Lumped Parameter Model	Powering the future: geoscience for New Zealand's energy transition	Ramtin Hekmatkhah, University of Canterbury

POSTERS

WEDNESDAY 2 DECEMBER

Poster Board	Poster Title	Session	Presenter
P2.50	Framework for assessing submarine volcanic hazards on the SW Pacific Tonga–Kermadec arc	Submarine Volcanic Eruptions	Hannah St. Louis, Auckland University of Technology
P2.51	Long-term magma recharge and top-down triggering of the 2022 Hunga eruption	Submarine Volcanic Eruptions	Enrico Califano, University of Otago
P2.52	A Catalog of Slow Slip Events at the Hikurangi Subduction Margin from 2006 to 2016	The Aotearoa New Zealand geoscience data landscape: getting ready for the AI revolution	Charles Williams, Earth Sciences New Zealand
P2.53	GeoNet Data Collection from Sensor to Cloud	The Aotearoa New Zealand geoscience data landscape: getting ready for the AI revolution	Mark Chadwick, Earth Sciences New Zealand
P2.54	MLNZ20 Magnitude Scale Operationalisation	The Aotearoa New Zealand geoscience data landscape: getting ready for the AI revolution	Sam Taylor-Offord, Earth Sciences New Zealand
P2.55	Seabed 2030: Pushing the needle towards 100% ocean mapping	The Aotearoa New Zealand geoscience data landscape: getting ready for the AI revolution	Sam Davidson, Earth Sciences New Zealand
P2.56	Integrating legacy fault databases: New opportunities for seamless onshore-offshore fault hazard research in Aotearoa New Zealand	The Aotearoa New Zealand geoscience data landscape: getting ready for the AI revolution	Sam Davidson, Earth Sciences New Zealand
P2.57	The GeoNet Citation Landscape: Understanding and Improving GeoNet Data Citation Practices	The Aotearoa New Zealand geoscience data landscape: getting ready for the AI revolution	Thomas Benson, Earth Sciences New Zealand
P2.58	GHA Assistant: an AI agent for real-time information-gathering during geohazard response	The Aotearoa New Zealand geoscience data landscape: getting ready for the AI revolution	Stuart Waring Dr Florent Aden-Antoniow, Earth Sciences NZ
P2.59	Current and Emerging Tsunami Monitoring Technologies for New Zealand	Tsunami, Meteorological Coastal Hazards, and Coastal Change – integrated approaches to understanding and preparing for the threats to our coasts.	Jonathan Hanson, Earth Sciences New Zealand

POSTERS

WEDNESDAY 2 DECEMBER

Poster Board	Poster Title	Session	Presenter
P2.60	Estimating tsunami casualties using agent-based evacuation models	Tsunami, Meteorological Coastal Hazards, and Coastal Change – integrated approaches to understanding and preparing for the threats to our coasts.	William Power, Earth Sciences New Zealand
P2.61	Improving Extreme Wave and Wave Runup Estimates for Coastal Hazard Assessment Along the Canterbury Coast, New Zealand	Tsunami, Meteorological Coastal Hazards, and Coastal Change – integrated approaches to understanding and preparing for the threats to our coasts.	Rafa Costa Santana, Earth Sciences New Zealand
P2.62	The Role of Subduction Zone Structure in Controlling Megathrust Slip: Insights from the 1952 and 2025 Kamchatka Earthquakes and Tsunamis	Tsunami, Meteorological Coastal Hazards, and Coastal Change – integrated approaches to understanding and preparing for the threats to our coasts.	Aditya Gusman, Earth Sciences New Zealand
P2.63	When to 'get gone'? Testing tsunami evacuation map designs, risk perceptions, and warnings	Tsunami, Meteorological Coastal Hazards, and Coastal Change – integrated approaches to understanding and preparing for the threats to our coasts.	Mary Anne Clive, Earth Sciences New Zealand
P2.64	Volcanic Lakes of Ahi Tupua	Volcanic Lakes: Dynamics, Hazards, and Community Resilience	AJ Marshall, Victoria University of Wellington
P2.65	New insights into the geology of the Kumeū-Silverdale area (northern Auckland)	Geological maps and mapping – advances and opportunities	Kyle Bland, Earth Sciences New Zealand
P2.66	Crystal in a haystack: searching for mid-Cretaceous zircon in the Otago Schist	Geological maps and mapping – advances and opportunities	Sophie Briggs, University of Otago
P2.67	Mapping a changing mountain landscape: geomorphology and surficial geology of the Aoraki region, central Southern Alps	Geological maps and mapping – advances and opportunities	David Barrell, Earth Sciences New Zealand
P2.68	Beyond the Patchwork: Seamless 2D–3D Seismic Integration Across the Taranaki Basin	Geological maps and mapping – advances and opportunities	Michele D'Ath-Woodd & Steve Morice, Seismomentum Limited
P2.69	Mapping Ancient Glaciations in Central Otago	Geological maps and mapping – advances and opportunities	Connor Dillon, University of Canterbury

POSTERS

WEDNESDAY 2 DECEMBER

Poster Board	Poster Title	Session	Presenter
P2.70	Emplaced or Displaced? Investigating an Anomalous Basalt Outcrop at Mount Horrible	Geological maps and mapping – advances and opportunities	Deanna Dodman, University of Otago
P2.71	Mapping the Green Island Fault: A marine seismic investigation of offshore faulting near Dunedin	Geological maps and mapping – advances and opportunities	Julia Mansfield, University of Otago
P2.72	A geological concept map of the Waimata Catchment and surrounds, Tairawhiti/Gisborne.	Geological maps and mapping – advances and opportunities	Colin Mazengarb, Retired Private Researcher
P2.73	Vent-scale mapping of the Okete Volcanic Formation in Whāingaroa (Raglan) Harbour	Geological maps and mapping – advances and opportunities	Oliver Mcleod, Waikato Regional Council
P2.74	Central Rangitīkei Geological Map, eastern Whanganui Basin	Geological maps and mapping – advances and opportunities	Julie Palmer, Massey University
P2.75	New constraints on the source of the 1929 Mw 7.0 Arthur's Pass earthquake	Geological maps and mapping – advances and opportunities	Matt Parker, University of Canterbury
P2.76	Integrated UAV-based magnetic, gamma, and electromagnetic surveys as a means of refining and objectifying geological maps in difficult-to-reach areas of mountainous regions of Eastern Eurasia	Geological maps and mapping – advances and opportunities	Alexander Parshin, Irkutsk National Research Technical University
P2.77	An update on mapping the Auckland Volcanic Field	Geological maps and mapping – advances and opportunities	Dougal Townsend, Earth Sciences New Zealand
P2.78	National 3d facies dataset for New Zealand groundwater assessments: progress and application	Geological maps and mapping – advances and opportunities	Paul White, Earth Sciences NZ
P2.79	3D Seismic mapping of the stratigraphy and structure of North Taranaki Bight, New Zealand	Geological maps and mapping – advances and opportunities	Felix Yan, University of Waikato

Conference Programme

Thursday 3 December 2026

08.00 – 16.00	Registration Desk Open		Toi Ohomai Institute of Technology
08.50 – 08.55	Welcome to Day 3 from Convenor		L202 (limited capacity) Overflow Room L204/L205
09.00 – 09.25	Plenary Talk – **Isabelle Chambefort** and **Rob Rankin**, Earth Sciences New Zealand and Mercury NZ *Geoshot New Zealand – Exploring the Deepheat of the Taupo Volcanic Zone*		
09.25 – 09.30	**Move rooms**		
	L202	*L204/L205*	*L301/L302/L303*
09.30 – 10.30	**7A The Aotearoa New Zealand geoscience data landscape: getting ready for the AI revolution** *Chair: Elisabetta D'anastasio, ESNZ, Mark Rattenbury, ESNZ, Jenny Black, ESNZ, Jonathan Hanson, ESNZ*	**7B Geothermal Aotearoa: Science, Energy, Community, and Environment** *Chairs: Anya Seward, ESNZ*	**7C Paleontology across the spectrum – big and small, young and old** *Chairs: Catherine Reid, University of Canterbury*
09.30 – 09.45	75 years of Rafter Radiocarbon Laboratory data **Jocelyn Turnbull, Earth Sciences New Zealand**	Northern Waiotapu: Delineate Geothermal Upflow from Active and Preserved Geothermal Features **Ayrton Hamilton, University of Auckland**	Two early Eocene billfishes from Hampden Beach, New Zealand **Morne Wium, Mamlambo Fossils**
09.45 – 10.00	From fragmented data systems to shared capability: the ESNZ Data Platform and AI-ready geoscience **Christof Mueller, Earth Sciences New Zealand**	Distal downflow limbs as complementary storage targets for dissolved CO2 in TVZ-style geothermal systems **Rodrigo Morales, University of Canterbury***	A new molecular fossil record of East Antarctic temperature and vegetation across the Eocene-Oligocene Transition. **Hannah Clark, Victoria University of Wellington***
10.00 – 10.15	From Slope to Scalable Data Product; Earth Sciences NZ's approach to developing and deploying advanced data pipelines for Nationwide Landslide Forecasting. **Alec Zoeller, Earth Sciences New Zealand**	The Gallium-Microbe Association in Siliceous Hot Springs **Michael Rowe, University of Auckland**	Testing reworking sources for Marlborough's apparent radiolarian K/Pg survivors **Nathan Blackadder, Victoria University of Wellington***
10.15 – 10.30	MCPs, a new access layer for geoscience data **Florent Aden-Antoniow, Earth Sciences New Zealand**	Gallium as a biosignature: unlocking enrichment mechanisms **Dominique Stallard, University of Auckland***	Did a megatsunami engulf the Wairarapa coast 66 million years ago? **James Lawson, Victoria University of Wellington***
10.30 – 11.00	**Morning Tea**		L Block

** Student Presenter*

Conference Programme

THURSDAY CONTINUED

	L202	*L204/L205*	*L301/L302/L303*
11.00 – 12.30	**8A Artificial Intelligence in geosciences** *Chair: Martin Tetard, ESNZ, Giuseppe Cortese, ESNZ, Matthieu Civel-Mazens, ESNZ*	**8B Powering the future: geoscience for New Zealand's energy transition** *Chairs: Sophie Pearson-Grant, ESNZ, David Dempsey, University of Canterbury, Paul Viskovic, ESNZ*	**8C Volcanic Lakes: Dynamics, Hazards, and Community Resilience** *Chairs: AJ Marshall, VUW, Agnes Mazot, Cynthia Werner*
11.00 – 11.15	**Keynote:** Cross-hazard AI for transferable, physically informed and decision-relevant forecasting **Alberto Ardid, University of Canterbury**	**Keynote:** Geochemical advances associated with fracture-controlled fluid flow in hot dry rock (EGS) geothermal resources at Utah FORGE, SW Utah, USA **Stuart Simmons, University of Utah**	Autonomous CO2 Flux Mapping on Volcanic Lakes using a Robotic Boat **Agnes Mazot, Earth Sciences New Zealand**
11.15 – 11.30	Assimilating Thermal, Seismic and Visual Monitoring Data into Machine Learning Models for Short-Term Eruption Forecasting at Lascar Volcano, Chile **Karina Hernandez Coilla, University of Canterbury***		Characterising Seasonally Variable Exogenic Controls on Carbon Dioxide Surface Flux at Rotoiti, Ōkataina Volcanic Centre, New Zealand **Anirudh Vathul and Tiruvallur Thattai, Victoria University of Wellington***
11.30 – 11.45	DARE, a new national Collaboratory to deliver multi-hazard resilience in Aotearoa New Zealand **Bill Fry, Earth Sciences New Zealand**	Embracing Uncertainty: An Open-Source Workflow for Geothermal Reservoir Modelling **Lucy Carson, Earth Sciences New Zealand**	Lake Rotomahana Natural Land Barrier **Justine Randell, Bay of Plenty Regional Council**
11.45 – 12.00	Illuminating the Puysegur Subduction Zone using five years of seismicity **Dr. Calum Chamberlain, Victoria University of Wellington**	Modeling Stress and Deformation Near Intersecting Misoriented Normal Faults in the Taupō Rift, Te Ahi Tupua: A New Approach to Target Geothermal Permeability? **Cécile Massiot, Earth Sciences New Zealand**	Volcanic Lakes of Ahi Tupua **AJ Marshall, Te Herenga Waka Victoria University of Wellington**
12.00 – 12.15	Using AI-Enhanced Cataloguing Approaches to Illuminate Faulting Across the Cook Strait **Codee-leigh Williams, Victoria University of Wellington***	The Structure and Evolution of the Tarata Thrust Zone (Taranaki Basin, Aotearoa New Zealand) **Romain Sylvain, University of Canterbury**	Rumbling and puffing: Linking volcanic tremor and SO_2 degassing at Whakaari/White Island **Sol Marconi, University of Canterbury***

** Student Presenter*

Conference Programme

THURSDAY CONTINUED

12.15 – 12.30	Using AI in geosciences: review of a few case studies. **Martin Tetard, Earth Sciences New Zealand**	Geological CO_2 Storage Suitability Assessment in New Zealand Onshore Saline Aquifers **Mohammadali Rezaei, University of Waikato***	4D assessment of mineral seal formation prior to phreatic eruptions **Geoff Kilgour, Earth Sciences New Zealand**
12.30 – 13.30	**Lunch**		L Block
	L202	*L204/L205*	*L301/L302/L303*
13.30 – 14.30	**9A Artificial Intelligence in geosciences** *Chair: Martin Tetard, ESNZ, Giuseppe Cortese, ESNZ, Matthieu Civel-Mazens, ESNZ*	**9B Tsunami, Meteorological Coastal Hazards, and Coastal Change – integrated approaches to understanding and preparing for the threats to our coasts** *Chairs: William Power, ESNZ, Rafael Santana, ESNZ, Edith Bretherton, ESNZ, Jonathan Hanson, ESNZ, Laura Hughes, ESNZ, Mary Anne Clive, ESNZ*	**9C Submarine Volcanic Eruptions** *Chairs: Kathleen Mckee, Michigan Technological University, Marta Ribo, Auckland University of Technology*
13.30 – 13.45	Monsoon, Upwelling, Silicon and Carbon cycling: climate driven interplays in the Arabian Sea up to the last InTerglacial (MUSiC ArT) **Matthieu Civel-Mazens, Earth Sciences New Zealand**	**Keynote:** From hazards to adaptation: Lessons from Auckland's Shoreline Adaptation Programme **Lara Clarke, Barker & Associates**	The Meroo Meadow Member, a new lowest member of the mid Permian Gerringong Volcanics, southern Sydney Basin: tuffs, dykes and latite and lamprophyre-like flows **Glen Bann**
13.45 – 14.00	A Hybrid GMPE–Machine Learning Approach for Rapid PGA and MMI Prediction for Earthquake Early Warning in New Zealand **Chanthujan Chandrakumar, Global Seismic Data New Zealand Limited**		History of large submarine eruptions before the destructive 15 January 2022 eruption of Hunga Volcano – preliminary results **Martin Crundwell, Victoria University of Wellington**
14.00 – 14.15	Seismic Data Quality: Probability of a Phase Pick using Earthquake Transformer **Sam Taylor-Offord, Earth Sciences New Zealand**	Investigating and communicating the tsunami hazard posed by sub-aerial landslides on Whakaari/White Island **Laura Hughes, Earth Sciences New Zealand**	Rapid submarine caldera collapse during the 2022 eruption of Hunga volcano (Tonga) **Marta Ribó, Auckland University of Technology**
14.15 – 14.30	Densifying Offshore Tsunami Observation Networks via Deep Learning Waveform Interpolation for Improved Wavefield Data Assimilation **Aditya Gusman, Earth Sciences New Zealand**	The 1855 Wairarapa Ms ~8.2 earthquake and tsunami: historical data, seismic rupture models and numerical modelling **Jean Roger, Earth Sciences New Zealand**	Remote acoustic and lightning observations capture the inundation and descent of the Hunga vent on 13–14 January 2022 **Kathleen McKee, Michigan Tech**
14.30 – 15.00	**Closing Ceremony**		L202

** Student Presenter*

FIELD TRIPS

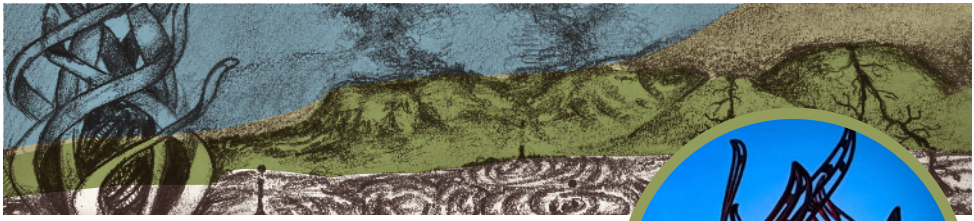
Friday 4 December 2026

08.00 – 13.30	**Tarawera 1886** Leader: Geoff Kilgour (Earth Sciences NZ) **Pick up location:** Te Puia, Wheelhouse Café, Hemo Road, Whakarewarewa, Rotorua **Drop off location**: Te Puia, Wheelhouse Café, Hemo Road, Whakarewarewa, Rotorua
08.00 – 17.00	**The Eruptive History of the Okataina Volcanic Centre: From the Rotoiti Ignimbrite through the Mangaone Subgroup to Post-Oruanui Activity** Leaders: Ryan Bailey (Massey University), Shane Rooyakkers (Earth Sciences NZ), Anke Zernack (Massey University) **Pick up location:** Toi Ohomai Institute of Technology **Drop off location:** Toi Ohomai Institute of Technology
08.00 – 17.00	**Waiotapu and Waimangu Thermal Areas** Leader: Ayrton Hamilton (University of Auckland) **Pick up location:** Toi Ohomai Institute of Technology **Drop off location:** Toi Ohomai Institute of Technology











Our Conference Design

Our conference landscape design was artistically created by Lily Scarberry, who incorporated the Te Ahi Tupua sculpture with mud pools and landscapes seen around the Rotorua area. Her sketch encapsulates the dynamic processes occurring in a simple, yet highly effective form

Visit Te Ahi Tupua during the Conference

You will see an image of the Te Ahi Tupua sculpture included in our conference design. Rotorua Lakes Council and Waka Kotahi NZ Transport Agency agreed to enter into a partnership to commission a large-scale artwork to become the centrepiece for upgrades to the intersection of State Highway 5 and 30, the roundabout at the southern entrance to Rotorua, just a short walk from Toi Ohomai.

We encourage you to take some time to visit and learn more about Te Ahi Tupua while you're at the conference.

Te Ahi Tupua weaves the stories of Ngātoroirangi, connections to other tribal groups and manaakitanga (hospitality).

Inspired by the world famous Pōhutu Geyser at Te Puia, the vortex incorporates different forms of geothermal energy. The flames link metaphorically to te ahi kā, keeping the home fires burning, reflecting the importance of tangata whenua, iwi kāinga and mana whenua.The co ncept of kaitiakitanga (guardianship) envelopes Te Ahi Tupua, highlighting the importance of caring for our environment through the generations.

Soaring 12m into the air, Te Ahi Tupua reaches skyward, acknowledging the pursuit of learning and knowledge. Elements of navigation, both ancient and modern, are also expressed, reflecting the people of the area - past, present and future.

Specialising in weaving and traditional wood and stone carving, the New Zealand Māori Arts and Crafts Institute developed the contemporary concept for Te Ahi Tupua. Stacy Gordine led the design, which embraced new technologies and materials.

He Korero Tuku Iho o Te Ahi Tupua | Historical Account of Geothermal Origins

Ngātoroirangi was the esteemed spiritual navigator of the Te Arawa waka that carried ancestors here from Hawaiki.

Source: https://www.rotorualakescouncil.nz/community/public-arts/te-ahi-tupua

Our Conference Catering

This event will be catered by culinary students from Toi Ohomai Institute of Technology.

As part of their three-year degree programme, the opportunity to cater for the GeoScience Conference will provide students with valuable real-world experience in a large-scale professional environment. This hands-on learning will help develop their skills, broaden their industry knowledge, and enhance their future employment opportunities within the dynamic hospitality sector.

Notes

Mokoia Campus Map

1 Mokoia Drive, Tihiotonga, Rotorua 3015

TOI-OHOMAI
Institute of Technology

