


| MONDAY, 28 November | | |
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| | Modelling Synthetic Earthquakes and Tsunami Workshop <i>Andy Nicol (University of Canterbury) and Bill Fry (GNS Science)</i> 9.30-16.30, Sport & Rugby Institute | Microanalysis in the Earth Sciences Workshop <i>Ery Hughes (GNS Science)</i> 8.30-17.30, AHB-1.35a-c (AgHort Building) |
| 16.00-19.00 | REGISTRATION, SSLB foyer | |
| 17.00-19.00 | ICEBREAKER Function, Wharerata | |
| from 19.30 | Early Career Researcher mixer, Rosie O'Grady's Irish Pub | |



| CONFERENCE PROGRAMME for TUESDAY, 29 November | | | |
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| 07.00 | REGISTRATION | | |
| 08.30 | OPENING CEREMONY SSLB1 (live-streamed to SSLB 2 overflow room) Mihi Whakatau (Terry Hapi) Conference opening address (Simon Hall) Conference Opening Welcome (convenors) Turitea Kapa Haka Roopu | | Bus transport for Kapa Haka Roopu sponsored by |
| 09.15 | Plenary sponsored by | PLENARY 1 SSLB1 (live-streamed to SSLB 2 overflow room) Charlotte Severne <i>"Once a Geologist, always a Geologist - 25 years on"</i> | |
| | SSLB1 | SSLB2 | SSLB3 |
| 9.45-10.45 | 1.1: 1a. Maunga Puia <i>Jon Procter, Sarah Tapscott (Massey University)</i> | 1.2: 3a. Communication, Education & Disaster Risk <i>Sally Potter (GNS Science); Alana Weir (University of Canterbury)</i> | 1.3: 2d. Integrated Coastal Dynamics <i>Kyle Bland, Phaedra Upton (GNS Science)</i> |
| 9.45-10.00 | Jarvis PA et al. - Interaction between vortices and settling-driven gravitational instabilities at the base of volcanic clouds | Hudson-Doyle EEH et al. - Uncertainty: Where do individuals think it comes from? Understanding mental models of natural hazards science and advice | Lawrence MJF et al. - Sedimentation Patterns in a Small Modern Anthropogenically-Influenced Estuary, Otuwhero Inlet, Abel Tasman |
| 10.00-10.15 | Kereszturi G et al. - Porosity, strength, and alteration – Volcano stability assessment using VNIR-SWIR reflectance spectroscopy | Das M, Becker JS et al. - Understanding communication processes and decision making during different stages of volcanic activity in Aotearoa New Zealand | Bloom C et al. - Earthquakes and Coastal Cliff Retreat in New Zealand |
| 10.15-10.30 | Mills S et al. - Textural characteristics of tephra formations as a proxy for understanding the impacts of a collapse cycle on the eruptive products at stratovolcanoes. | Charlton D et al. - Co creating a volcanic hazard mapping framework for Aotearoa New Zealand | Keller ED et al. - Modelling the probability of inundation with Bayesian Networks: A pilot study in the Hauraki Plains |
| 10.30-10.45 | Rooyackers SM, Chambefort I et al. - Tracking Magma-Crust-Fluid Interactions at High Temporal Resolution: Magmatic Oxygen Isotopes in the Central Taupō Volcanic Zone | Lake-Hammond A & Orchiston C - Sharing the Science Beneath Our Feet: Preparing for the next Alpine Fault earthquake | Bland KJ et al. - Co-designing research for environmental, social, and cultural benefit: Tātaihia te Parataiao o te Wahapū – Hokianga Harbour Sedimentation Project |
| 10.45-11.15 | Morning Tea | | |

| | SSLB1 | SSLB2 | SSLB3 |
|--------------------|---|---|--|
| 11.15-13.00 | 2.1: 1a. Maunga Puia <i>Jon Procter, Shannen Mills (Massey University)</i> | 2.2: 1d. Seismotectonics of Aotearoa/NZ & beyond <i>Camilla Penney (University of Canterbury); Genevieve Coffey (GNS Science); Jack Williams (University of Otago)</i> | 2.3: 2e. Marine geological processes <i>Jess Hillman (GNS Science); Sally Watson (NIWA); Karsten Kroeger (GNS Science); Sarah Seabrook (NIWA)</i> |
| 11.15-11.30 | Heise W et al. - Mesh Design for inversion model resolution of the magmatic system beneath Mount Tongariro, New Zealand | Ellis S et al. - Transient fluctuations in stress and slip caused by geometric irregularities in shear zones: Field examples and numerical model analogues for active subduction interface deformation | Maier KL et al. - Dynamic seafloor environments – High-resolution measurements from Kaikōura Submarine Canyon |
| 11.30-11.45 | Otway P, Illsley-Kemp F & Mestel ERH - Taupō volcano's restless nature revealed by 42 years of deformation surveys, 1979–2021 | Perez-Silva A et al. - Properties of slow slip events explained by numerical model of rate-strengthening faults subject to periodic pore fluid pressure perturbations | Orpin AR et al. - Using the 2016 Kaikōura earthquake to test hypotheses that underpin turbidite paleoseismology |
| 11.45-12.00 | Kósik S et al. - New constraints on the age and timescale of activity of the Puketerata maar-lava dome complex, Taupō Volcanic Zone, New Zealand | Pita Sllim O et al. - Spatiotemporal analysis of repeating earthquakes near Pōrangahau, Hikurangi Margin, New Zealand. | Tickle S et al. - 2016 Kaikōura earthquake turbidite shows that a single core could be representative of the seismic history of a submarine distributary system |
| 12.00-12.15 | Mestel ERH et al. - Three years of earthquake activity at Taupō volcano investigated with an enhanced seismic network | Seebeck H et al. - Geologic, earthquake and tsunami modelling of the active Cape Egmont Fault Zone | Kroeger KF et al. - Microbial gas generation and gas hydrate formation at the New Zealand Hikurangi Margin |
| 12.15-12.30 | Piva S et al. - Resolving past eruptive impacts from Taupō supervolcano using novel high resolution sampling techniques | Stern T et al. - Crustal structure, mantle melt zones and processes beneath the Taupo Volcanic Zone, New Zealand: evidence from active-source seismic exploration and GPS data | Hillman JIT et al. - Redefining the southern extent of the Hikurangi Margin Gas Hydrate Province |
| 12.30-12.45 | Thrasher G et al. - Interaction of Taranaki Maunga and the Cape Egmont Fault Zone | Eberhart-Phillips D, Stirling M et al. - The influence of basement terranes on tectonic deformation: joint earthquake travel-time and ambient noise tomography of the southern South Island, New Zealand | Davy B et al. - Sub-bottom profiler dating of glacial horizons and the timing of carbonate mound formation on the Southern Hikurangi Margin |
| 12..45-13.00 | Davidson A et al. - Challenging the paradigm of ²³⁸ U-excesses dominating arc settings: A Uranium-series isotopic investigation of Mt Taranaki, New Zealand | Stirling M et al. - Earthquake source characterisation in southern New Zealand: an update | Black JA et al. - 100% of the World Ocean floor mapped by 2030 - The Nippon Foundation/GEBCO Seabed 2030 project |
| 13.00-14.30 | Lunch, meetings, and poster viewing | | |
| 13.30-14.30 | LAVANZ SIG <i>Geoff Kilgour</i> SSLB1 | GeOID SIG <i>Jenny Stein</i> GLB2.03 | WOMEESA <i>Jess Hillman</i> GLB2.05 |


| CONFERENCE PROGRAMME for TUESDAY, 29 November | | | |
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| | SSLB1 | SSLB2 | SSLB3 |
| 14.30-16.00 | 3.1: 1a. Maunga Puia <i>Jon Procter (Massey University); Marlena Prentice (University of Waikato)</i> | 3.2: 1d. Seismotectonics of Aotearoa/NZ & beyond <i>Camilla Penney (University of Canterbury); Genevieve Coffey (GNS Science); Jack Williams (University of Otago)</i> | 3.3: 2e. Marine geological processes <i>Jess Hillman (GNS Science); Sally Watson (NIWA); Karsten Kroeger (GNS Science); Sarah Seabrook (NIWA)</i> |
| 14.30-14.45 | Bann G et al. - Newly identified tuffs from the early - mid Permian southern Sydney Basin: explosive volcanism and associated ecological mortality derived from northwest Zealandia. | Matheson A et al. - Modelling Earthquake Sources in Aotearoa using Joint Analysis of Seismological and Geodetic Data | Beagley JE et al. - Paleoenvironment and sediment basins in Dusky Sound, New Zealand characterised through seismic stratigraphy and sediment cores |
| 14.45-15.00 | Huebsch M et al. - Using 3D textures to assess magma-water interaction dynamics across varying conditions at Hunga volcano | Hirschberg H & Sutherland R - A Kinematic Model of New Zealand Fault Slip Rates and Distributed Deformation | Isson TT & Rauzi S - Do silica secreting organisms regulate climate on Earth? |
| 15.00-15.15 | Krippner J et al. - Geomorphological evolution of the Ngāuruhoe summit from the 1800s to the present day | Warren-Smith E et al. - Using Microearthquakes to Probe the Structure and Mechanics of Alpine Fault Segment Boundaries and Quantify Implications for Future Rupture | Nodder SD et al. - Importance of near-bed lateral processes in biogenic fluxes to the seafloor in deep-water environments, Aotearoa New Zealand |
| 15.15-15.30 | Stern S et al. - New insights into one of the largest submarine caldera eruptions of the last 2000 years in the South Pacific, the ~AD1450 Kuwae eruption, Vanuatu | Bourguignon S et al. - 3D image of seismic attenuation along the central Alpine Fault, New Zealand, from dense temporary seismic array data | Ribó M et al. - Microplastics in marine sediments: Findings from the first study around Aotearoa/New Zealand |
| 15.30-15.45 | Zernack AV et al. - The origin, preservation and prehistoric human use of ocean-rafted pumice found in raised beach ridges and archaeological sites in Northern Norway | Sintenie J et al. - Slip rates on the eastern Hope Fault, New Zealand | Warnke F et al. - High-resolution images of paleo-pockmarks on the Chatham Rise using densely spaced echosounder profiles |
| 15.45-16.00 | O'Brien L et al. - Providing a tephrochronological framework for 10myrs of deposition in the Southern Wairarapa | Townend J et al. - The Southern Alps Long Skinny Array (SALSA): Virtual Earthquake Analysis of Future Alpine Fault Earthquakes and Ground-Shaking | Watson SJ et al. - The footprint of ship anchoring on the seafloor |
| 16.00-17.30 | Poster session/afternoon tea: SSLB Upper Foyer | | |
| <i>Sponsored by</i>  NIWA Teihoro Nukurangi | 1a. Maunga Puia: A1-21 1b. Igneous Petrology: A22-32 1d. Seismotectonics: A33-48 | 3a. Communication, Education, Disaster Risk: A49-51 2d. Integrated Coastal Dynamics: A52-53 2e. Marine geological processes: A54-59 | 2b. Our Changing landscapes: A60-69 4c. Engineering Geology/Geomorphology: A70-72 4b. Remote Sensing & Geospatial Data: A73-81 |
| 17.30-19.00 | PUBLIC LECTURE SSLB1 (live-streamed to SSLB 2 overflow room) Sally Potter "Warning! Natural hazard forecasts and why people respond in different ways" Kate Clark "Past coastal earthquakes and tsunamis of Aotearoa/New Zealand, and preparing for our shaky future" | | |
| 19.00-late | FUN AND GAMES BBQ DINNER Sports and Rugby Institute | | |

| CONFERENCE PROGRAMME for WEDNESDAY, 30 November | | | |
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| 07.00 | REGISTRATION | | |
| 08.00-08.30 | PLENARY 2 SSLB1 (live-streamed to SSLB 2 overflow room) Kim Martelli "A Career in the Geosciences: A world of opportunities from exploration to engineering!" | | |
| | <i>SSLB1</i> | <i>SSLB2</i> | <i>SSLB3</i> |
| 08.30-10.00 | 4.1: Special Session 1e. Okataina Volcanic Centre <i>Ted Bertrand, Cécile Massiot, Cornel de Ronde (GNS Science)</i> | 4.2: 1c. Zealandia through space & time <i>Dominic Strogen (GNS Science); James Crampton (VUW)</i> | 4.3: 3c. Science in response and recovery <i>Bill Fry, Anna Kaiser, Jen Andrews, Libby Abbott (Te Pū Ao)</i> |
| 08.30-08.45 | Bertrand T et al. - Inferring the roots of volcano-geothermal systems in the Rotorua and Okataina calderas with Magnetotelluric models | Strogen D et al. - Palaeogeographic evolution of Zealandia: mid-Cretaceous to present | Kaiser A et al. - Rapid characterisation of earthquakes & tsunami (R-CET programme) - The local earthquake challenge |
| 08.45-09.00 | Hamling I et al. - Estimating the distribution of melt beneath the Okataina Caldera, New Zealand: An integrated approach using geodesy, seismology and magnetotellurics | Palmer M et al. - The timing of Dun Mountain Ophiolite emplacement via Rb-Sr isotope dating of metasomatic reactions along the Livingstone Fault | Andrews J et al. - Rapid rupture characterisation for New Zealand using the Finite-fault Rupture Detector (FinDer) Algorithm |
| 09.00-09.15 | Carson L et al. - 3D Visualisation model of the basement geology and caldera structure at Ōkataina Volcanic Centre | MacFarlan D - Zealandian Brachiopod faunas and the Jurassic Crises | Horspool N, ..., Kaiser A et al. - GeoNet's Shaking Layer Tool: Automatic generation of maps of near-real time ground shaking for post-event response |
| 09.15-09.30 | Villamor P et al. - Fault Ruptures Triggered by Large Rhyolitic Eruptions at the Boundary Between Tectonic and Magmatic Rift Segments: The Manawahe Fault, Taupō Rift, New Zealand | Powell NG - Continental glaciation in New Zealand and West Antarctica during the Plenus Cold Event: relevance for modelling geoengineered CO ₂ drawdown via ocean fertilisation | Holden C et al. - Engaging with End-users Towards an Earthquake Early Warning System for New Zealand |
| 09.30-09.45 | Berryman K, Villamor P et al. - Volcano-tectonic interactions at the southern margin of the Okataina Volcanic Centre, Taupō Volcanic Zone | Young G et al. - A Cretaceous Ichthyosaur from North Canterbury | Gledhill K & Fry B - RCET Contribution to Rapid Tsunami Threat Characterization |
| 09.45-10.00 | Hughes E et al. - SO ₂ emissions from explosive basaltic eruptions at Okataina | Hollis CJ et al. - Making sense of Paleocene Zealandia | Taylor-Offord S & McDougall T - The Story of a Seismic Network: the R-CET Te Tai Tokerau Northland Array |
| 10.00-10.30 | Morning Tea | | |




| | SSLB1 | | SSLB2 | | SSLB3 | |
|--------------------|--|--|--|--|--|--|
| 10.30-12.00 | 5.1: Special Session 1e. Okataina Volcanic Centre <i>Ted Bertrand, Cécile Massiot, Cornel de Ronde (GNS Science)</i> | | 5.2: 1c. Zealandia through space & time <i>Dominic Strogon (GNS Science); James Crampton (VUW)</i> | | 5.3: 4e. Geoscience for Future Energy Systems <i>Mac Beggs (University of Canterbury); Julie Palmer (Massey University)</i> | |
| 10.30-10.45 | White P & Leonard G - Evolution of geology and groundwater-geothermal systems in the Okataina caldera groundwater catchment | | De Pietri VL et al. - Marine Avian Diversity in the Paleocene of New Zealand | | Bennett D - The Last Frontier (for now) | |
| 10.45-11.00 | Pearson-Grant S et al. - Fluid and heat flow in the Ōkataina Volcanic Centre and at Lake Rotomahana, New Zealand | | Thomas DB et al. - Largest-known fossil penguin moves peak body size closer to first appearance of Sphenisciformes in Zealandia | | Beggs M et al. - Hikurangi Margin Gas Hydrate Deposits: Might they ever have been developed as an energy resource? | |
| 11.00-11.15 | Stucker V et al. - Comparison of hydrothermal fluids and fields of the northern Okataina Volcanic Centre: fifty years ago to present time | | Parker M et al. - Provenance of Miocene–Pleistocene conglomerates in the northern Canterbury Basin: implications for exhumation along the Pacific–Australian plate boundary | | Chambefort I et al. - Geothermal: The next generation - Advancing the understanding of New Zealand’s supercritical resources (Keynote) | |
| 11.15-11.30 | De Ronde CEJ et al. - The geology and geophysics of Lake Rotoiti, New Zealand: Implications for sublacustrine geothermal activity | | Sagar M et al. - An age model for the Tongaporutuan (Late Miocene) reference section, northern Taranaki | | Nicol A et al. - Underground Storage of Green hydrogen in Aotearoa-New Zealand | |
| 11.30-11.45 | Yang J et al. - Understanding caldera degassing from a detailed investigation at Lake Rotoiti, Okataina Volcanic Centre, New Zealand | | Shalla Y et al. - Active faults identified between the Taupō Rift and the North Island Dextral Fault Belt: kinematics and links with volcanism from the Taupō Volcanic Centre | | Adam L, Dempsey D et al. - Opportunities for CO ₂ Sequestration in New Zealand Rocks | |
| 11.45-12.00 | Massiot C et al. - CALDERA: a scientific drilling idea to unravel Connections Among Life, geo-Dynamics and Eruptions in a Rifting Arc caldera | | Upton P et al. - Plate boundary intracontinental transfer across the developing Marlborough Fault System, New Zealand | | Yates E et al. - Petrophysical properties and reservoir potential of rhyolitic lava domes | |
| 12.00-13.30 | Lunch, meetings, and poster viewing | | | | | |
| 12.30-13.30 | Scientific drilling - CALDERA <i>Cécile Massiot</i> SSLB1 | Geochemistry SIG <i>Sebastian Naeher</i> GLB2.03 | Sedimentology <i>Mark Lawrence</i> GLB2.05 | Oil & Gas SIG <i>Mac Beggs</i> GLB3.01 | Palaeontology SIG <i>Daniel Thomas</i> GLB3.02 | |

| CONFERENCE PROGRAMME for WEDNESDAY, 30 November | | | |
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| | SSLB1 | SSLB2 | SSLB3 |
| 13.30-15.30 | 6.1: Special Symposium NZNSHM 2022 <i>Matt Gerstenberger, Russ Van Dissen (GNS Science)</i> | 6.2: 2c. Climate and environmental change <i>Peter Almond (Lincoln University); Shaun Eaves (VUW); Olivia Truax, David Barrell (GNS Science)</i> | 6.3: 4a. Computational Advances in Geosciences <i>Stuart Mead (Massey University); David Dempsey (University of Canterbury)</i> |
| 13.30-13.45 | Gerstenberger M et al. - The 2022 Aotearoa New Zealand National Seismic Hazard Model | Wheeler C et al. - Do cyanobacterial blooms occur naturally in dune lakes? | Fry B et al. - Physics to resilience: Next generation earthquake and tsunami response (Keynote) |
| 13.45-14.00 | Bora S et al. - The 2022 revision of National Seismic Hazard Model (NSHM) for New Zealand: candidate Ground-Motion Models (GMMs) and associated hazard sensitivities | Ryan M, Holt K et al. - Source-to-sink archives of vegetation change since the Last Glacial Maximum, Waipaoa Sedimentary System, New Zealand. | Wang X et al. - COMCOT tsunami simulation model – features and recent applications |
| 14.00-14.15 | Seebeck H et al. - The New Zealand Community Fault Model version 1.0 | Shorrock A et al. - Sedimentary response to glacio-eustatic changes in the Northern Hikurangi subduction margin, New Zealand | Steinke B et al. - Automatic recognition of pre- and syn-eruptive seismic patterns at andesitic, dome-building stratovolcanoes |
| 14.15-14.30 | DiCaprio C et al. - Computational Infrastructure of the NZ-NSHM: how to calculate REALLY BIG seismic hazard models | Gorman AR et al. - Seismic and gravity constraints on the stratigraphy of the Siple Coast region underlying the Kamb Ice Stream, Antarctica | Ardid A, Dempsey D et al.- Discovering eruption precursors & identifying fluid release events from correlations of feature time series engineered from seismic records: Applications to Whakaari & Ruapehu volcanoes |
| 14.30-14.45 | Coffey G et al. - Derivation of paleo-earthquake recurrence intervals and probabilities of detection for NZ NSHM 2022, and impact on hazard | Grant G et al. - Regional amplified warming in the Southwest Pacific during the mid–Pliocene (3.3–3.0 Ma) | Hernandez BC et al. - Geochemistry: What can it tell us about eruption explosivity? |
| 14.45-15.00 | Manea E, Kaiser A et al. - Evaluation of site parameters to inform seismic site characterization in New Zealand | Rauzi S & Isson TT - Marine clay formation across the end-Permian mass extinction event. | Huijser D et al. - BIROC-H ₂ O: A new way to process FTIR spectra of olivine hosted basaltic melt inclusions |
| 15.00-15.15 | Litchfield N et al - New Zealand Paleoseismic Site Database | Verleijdonk B et al. - Novel techniques for reconstructing relative changes in past UV-B flux | Morice S et al. - The Taranaki 3D Cluster Buster: A Regional Scale Seismic Dataset enabled by High-Performance Computing |
| 15.15-15.30 | Wallace L et al. - Geodetic deformation model for the 2022 New Zealand National Seismic Hazard Model | Griffin AG et al. - GNS Science’s journey to be carbon neutral by 2025 | Mavroeidi M & Rattenbury M - Fair principles applied to high-value geoscience datasets |
| 15.30-17.00 | Poster session/afternoon tea: SSLB Upper Foyer | | |
| | 1e. Okataina Volcanic Centre: B1-5 2a. Natural Hazards: B6-20 Special Symposium NZNSHM 2022: B21-25 3c. Science in response & recovery: B26-31 | 3b. GeoEducation, Outreach, Int Development B32-37 1c. Zealandia through space & time: B38-44 2c. Climate & environmental change: B45-55 4d. Geochemical Tools & Applications: B56-62 | 4a. Computational Advances: B63-68 4e. Future Energy Systems: B69-72 4f. Mineral Deposits: B73-75 |
| 17.00-18.00 | GSNZ AGM | | |
| 18.30-18.40 | <i>Buses depart Massey University</i> | | |
| 19.00 – 0.00 | Conference Gala Dinner “Dream Big: Opening the Door to a Whole New World”, Awapuni Racecourse | | |




| CONFERENCE PROGRAMME for THURSDAY, 01 December | | | |
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| 07.00 | REGISTRATION | | |
| 08.00-08.30 | PLENARY 3 SSLB1 (live-streamed to SSLB 2 overflow room) Hollei Gabrielsen "Herenga tangata, hononga ki te whenua." | | |
| | SSLB1 | SSLB2 | SSLB3 |
| 08.30-9.30 | 7.1: 2a. Natural Hazards <i>Melody Whitehead, Stuart Mead, Mark Bebbington (Massey University)</i> | 7.2: 1b. Igneous Petrology & Geochemistry <i>Georg Zellmer (Massey University); Carlos Santa Cruz (Massey University)</i> | 7.3: 2b. Our Changing landscapes <i>Sam McColl, David Barrell (GNS Science); Kevin Norton (VUW); Karoly Nemeth</i> |
| 08.30-08.45 | Roger J et al. - The global tsunami triggered by the Mw 8.1 South Sandwich Islands earthquake of the 12 August 2021: records and consequences in NZ | Burgin D et al. - Deciphering the Martian mantle from in-situ ⁸⁷ Sr/ ⁸⁶ Sr measurements on shock melted plagioclase in Martian meteorites | Rees C et al. - Following the Waitapu Shell Conglomerate (0.9 Ma) across the Whanganui Basin |
| 08.45-09.00 | Bull S et al. - Landslides as tsunami sources in the Tasman Sea/ Te Tai-o-Rēhua | Baxter RJM et al. - Magma-flux regulated final depths of magma storage under Iceland | McEwan E et al. - Investigating coseismic avulsion hazards: A new approach for earthquake and flood hazard assessment |
| 09.00-09.15 | Williams S et al. - From Geological evidence to tsunami impact forecasting in the Southwest Pacific Islands | Rattenbury M et al. - Pluton Map characterisation of Aotearoa New Zealand's intrusive rocks | Wilson-Harding I et al. - Reconstructing Landscape Change from Earthquakes and Storm Events in Lake Gunn, Fiordland |
| 09.15-09.30 | Hughes L et al. - Assessing Tsunami Hazard in New Zealand using a Long Time Scale Synthetic Earthquake Catalogue | Seelig LK et al. - Using trace element and isotope geochemistry of central Taupō Volcanic Zone (New Zealand) granitoids to understand the processes contributing to silicic magmatism | Watson L et al. - Using local infrasound arrays to detect plunging snow avalanches along the Milford Road, New Zealand Aotearoa |
| 9.30-10.30 | 8.1  | 8.2: 1b. Igneous Petrology & Geochemistry <i>Continued</i> | 8.3: 4c. Engineering Geology/Geomorphology <i>Sam McColl, Saskia de Vilder, Andrea Wolter, Kerry Leith (GNS Science)</i> |
| 9.30-9.45 | Borrero JC, Cronin S et al. - Tsunami in Tonga from the January 2022 eruption of Hunga Volcano | Corella Santa Cruz C et al. - New comprehensive Pb isotopic data elucidate novel petrogenetic processes across the Taupo Volcanic Zone | De Vilder S et al. - Disaggregating Landslide Risk: What drives landslide risk in Franz Josef and Fox Glacier Valleys? |
| 9.45-10.00 | Cronin S et al. – The big boom | Coulthard et al. (Zellmer G) - Plutonic nature of transcrustal magmatic systems revealed by sub-micron Sr-disequilibria in plagioclase | Singeisen C et al. - Mechanisms of rock slope failures triggered by the 2016 Kaikōura earthquake |
| 10.00-10.15 | Cave M - Impact of cascading severe weather events on vulnerable communities | Lewis KR et al. - Experimental Constraints on Homogenization of Plagioclase-Hosted Melt Inclusions from Plagioclase Ultraphyric Basalts | Stronach A & Stern T - A New Basin-Depth Map of the Fault-Bound Wellington CBD Based on Residual Gravity Anomalies |
| 10.15-10.30 | Johns B & Cave M - New Zealand National Lidar and Regional Applications | Werner C et al. - Is Taranaki Exhaling? Detecting Volatile Emissions from a Dormant Volcano | Kirk P, Dixon B et al. - An evolving story of the geology of the Manawatū Saddle: Evidence from the Manawatū-Tararua highway |
| 10.30-11.00 | Morning Tea | | |

| | SSLB1 | SSLB2 | SSLB3 |
|--------------------|--|---|--|
| 11.00-13.00 | 9.1: 2a. Natural Hazards <i>Melody Whitehead, Stuart Mead, Mark Bebbington (Massey University)</i> | 9.2: 4d. Geochemical Tools & Applications <i>Sebastian Naeher (GNS Science); James Scott (University of Otago)</i> | 9.3: 4b. Remote Sensing & Geospatial Data Analysis <i>Gabor Kereszturi (Massey University); Ian Hamling (GNS Science)</i> |
| 11.00-11.15 | Lang J et al. - Earthquake-controlled episodic growth of a Holocene stalagmite, eastern North Island, New Zealand. | Bird M - Abundance and isotope (¹³ C, ¹⁴ C) composition of pyrogenic carbon (Keynote) | Lamb O et al. - Listening to a basaltic fissure eruption: Key findings from the 2021 Fagradalsfjall eruption, Iceland |
| 11.15-11.30 | Viskovic P et al. - Digitising and vectorising paper seismograms in the national earthquake information database | | Perttu A - An automated approach to plume height estimation using infrasound from local to remote |
| 11.30-11.45 | Penney C et al. - In good shape? The impacts of variable fault geometries on synthetic earthquake catalogues from physics-based earthquake simulators | Webster-Brown J et al. - Wild Fire Geochemistry: Lessons for Managing Future Impacts on Water Quality | Haneef S, Van Wijk K et al. - Distributed Acoustic Sensing (DAS) for geophysical applications in Aotearoa, New Zealand |
| 11.45-12.00 | Liao Y-W M et al. - The role of frictional heterogeneities in the earthquake cycle | Naeher S et al. - Tracing organic matter derived from Australian dust and bushfires in New Zealand using lipid biomarkers | Kellett R et al. - Integration of Airborne Electromagnetic models with ground geophysics and detailed borehole data: Heretaunga Plains |
| 12.00-12.15 | Humphrey J et al. - Earthquake timings and fault interactions in Central New Zealand | Balfoort L et al. - Environmental conditions of the West Antarctic Ice Sheet during the Miocene: insights from organic biomarker distributions | Nersezova EE et al. - Composition and structure of hot spring digitate sinter: preparation for remote sampling on Mars |
| 12.15-12.30 | Howarth J et al. - Quantitative lacustrine paleoseismology may reveal the rupture direction of the 1717 CE Alpine Fault earthquake | | Chakraborty R et al. - Arsenic zonation for mineral prospecting at Rise and Shine Shear Zone, New Zealand, using hyperspectral remote sensing |
| 12.30-12.45 | Langridge R et al. - The fault in our horizons: Regional active fault mapping updates | Frontin-Rollet GE et al. - Geochemical Mapping of Aotearoa's Marine Sediments: an update for Bay of Islands area | Thwaites M et al. - A multidisciplinary source to sink approach in mapping erosion 'hot-spots' and sediment pathways in a harbour subcatchment of Te Whakaraupō/Lyttelton, Banks Peninsula. |
| 12..45-13.00 | | Dietrich Z, C Reid et al. - Geochemical fingerprinting of sediment sources infilling Whakaraupō / Lyttelton Harbour, New Zealand | Jones K et al. - A new approach to quantify sediment conveyance following the 2016 Kaikōura earthquake, New Zealand |
| 13.00-14.30 | Lunch | | |
| 13.30-14.00 | Catherine Ross (GeoNet Programme Leader) "GEONET – PART OF THE FABRIC OF NEW ZEALAND" (in SSLB1 & streamed to SSLB2) | | |

CONFERENCE PROGRAMME for THURSDAY, 01 December

| | SSLB1 | SSLB2 | |
|--------------------|---|--|---|
| 14.30-15.30 | 10.1: 2a. Natural Hazards <i>Melody Whitehead, Stuart Mead, Mark Bebbington (Massey University)</i> | 10.2: 4d. Geochemical Tools & Applications <i>Sebastian Naeher (GNS Science); James Scott (University of Otago)</i> | 10.3: 3b. GeoEducation, Outreach & International Development <i>Jenny Stein (GSNZ)</i> |
| 14.30-14.45 | Robert G & Carazzo G - Study of the formation and dynamics of secondary plumes through 2D experiments and models | Stirling C - Biogeochemical cycling of trace metals and their isotopes: Links to past and present climate change (Keynote) | Kennedy B et al. - Virtual fieldtrips to volcanoes-10-year perspective |
| 14.45-15.00 | Wild A et al. - Short-term eruption forecasting for the Auckland Volcanic Field using a Bayesian Event Tree | | Boyes A et al. - A Portal for Geoscience Webmaps and Information on the Te Riu-a-māui / Zealandia Region |
| 15.00-15.15 | Dempsey D et al. - Evaluation of short-term eruption forecasting at Whakaari, New Zealand | Rowe MC et al. - Strontium Isotope Ratios of New Zealand Kauri: An Indicator of Climate Conditions? | Zakharovskiy V & Nemeth K - The influence of geomorphological models on geosite recognition utilizing qualitative-quantitative assessment of geodiversity |
| 15.15-15.30 | Bebbington M et al. - Multiphase Eruption Forecasting Using Analogue Volcano, Eruption and Hazard Sets | Hilton TW et al. - Auckland's Fossil Fuel CO ₂ Emissions: A Bottom-up Inventory Informed by Atmospheric Radiocarbon Observations | Stevenson T et al. - Finding New Zealand's next meteorite with the Fireballs Aotearoa meteor-tracking camera network: conception, results, outreach |
| 15.30-16.30 | <p align="center">CLOSING CEREMONY SSLB1 (live-streamed to SSLB2) Conference Convenors, 2021/22 Committee and GSNZ NZJGG speech and Best Student Talks Best Student Posters 2023 Convenors</p> | | <p align="center">Best Student Poster sponsored by</p>  <p align="center">VOLCANIC RISK SOLUTIONS</p> |

Post-Conference Field Trips

| FRIDAY, 2 December | | FRIDAY/SATURDAY 2-3 December |
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| <p>Te Ahu a Turanga: Manawatu Tararua Highway and Cultural Sites of importance</p> <p><i>Ben Dixon (Te Ahu A Turanga Alliance) and Terry Hapi (Rangitāne o Manawatu)</i></p> <p align="center">Field trip sponsored by</p>  <p align="center"><i>Bringing ideas to life</i></p> | <p>Land use and stratigraphy within the eastern Whanganui Basin, lower North Island, NZ</p> <p><i>Callum Rees, Alan Palmer, Julie Palmer (Massey University) and Malcolm Todd (Horizons Regional Council)</i></p> <p align="center">Field trip sponsored by</p>  | <p>Mt Ruapehu – Tephra stratigraphy, mass flow deposits & volcanic hazards</p> <p><i>Gabor Kereszturi, Anja Moebis, Jonathan Procter and Stuart Mead (Massey University)</i></p>  |