

DT1 Monthly videocalls

This page provides a schedule of talks, and also PDFs of presentations, at the monthly DT1 calls. The general schedule is as follows:

- 'Odd months': Three calls for each separate strand of the DT1 programme:
 - Ground motion: last Thursday of every month 9-1030am NZT: <https://canterbury.zoom.us/j/96234512607> (download *.ics file for calendar)
 - 'Liquefaction': last Thursday of every month 1030-noon NZT: <https://canterbury.zoom.us/j/92535672691> (download *.ics file for calendar)
 - 'Surface Rupture & Slope Stability': last Thursday of every month 1230-2pm NZT: <https://canterbury.zoom.us/j/99703191373> (download *.ics file for calendar)
- 'Even months': One call to discuss integration across all three strands of the DT1 programme:
 - 'Integration: Wellington case study': last Thursday of every month 9-1030am NZT: <https://canterbury.zoom.us/j/92660130077> (download *.ics file for calendar)

Thursday 30th May 2024

'Ground motion' agenda: 9-1030am NZT: <https://canterbury.zoom.us/j/96234512607>

- Welcome and updates
- "Spatial correlation of ground-motion intensity measures and implications for seismic risk assessment studies" (Morteza Abbasnejadfar, University of Canterbury)
- "Development of empirical ground-motion models for Northern South America and lessons for other regions" (Cesar Pajaro, University of Canterbury)

Attendees: Robin Lee, Ayushi Tiwari, Brendon Bradley, Felipe Kuncar, Chris de la Torre, Morteza Abbasnejadfar, Cesar Pajaro, Juan Jose Sepulveda, Sarah Neill, Claudio Schill (UC), Andrew Stolte, Liam Wotherspoon (UA), Tim Stern (Vic).

'Liquefaction' agenda: 1030-noon NZT: <https://canterbury.zoom.us/j/92535672691>

- Welcome and update
- Influence of pumice and fines contents on the extent of particle crushing in pumiceous sand-silt mixtures during undrained cyclic triaxial loading (Jordanka Chaneva, T+T/Univ. of Waikato)
- Three-dimensional discrete element analysis of liquefaction behaviour of crushable pumice sand (Sam Bahmani, Unitec/Univ. of Auckland)
- Liquefaction potential of reconstituted New Zealand loess (Katherine Yates, Univ. of Canterbury)
- Quantitative criterion for the goodness-of-fit of synthetic pore water pressure time series (Catherine Jiang, Univ. of Auckland/A O'Sullivan & Associates)
- Multi-scenario approach for liquefaction exposure assessments using a geospatial liquefaction model (Liam Wotherspoon, Univ. of Auckland)

Attendees: Katherine Yates, Chris de la Torre, Mark Stringer, Robin Lee (UC), Rolando Orense, Liam Wotherspoon, Andrew Stolte, Arezoo Rahimi, Romain Meite, Kristian Azul, Denny Budiman, Catherine Jiang, Sam Bahmani (UoA), Kim de Graff, Jordanka Chaneva (UoW), Ben Kennerley (T+T), CY Chin (Beca), Sadeq Asadi (Jacobs), Baqer Asadi (Fletcher)

'Surface rupture and slope stability' agenda: 1230-1400 NZT: <https://canterbury.zoom.us/j/99703191373>

No call this month, due to recent "Fault Displacement Hazard Analysis Workshop".

Thursday 28th March 2024

'Ground motion' agenda: 9-1030am NZT: <https://canterbury.zoom.us/j/96234512607>

- Welcome and updates
- "Urban geophysics and the basin edge-effect, Wellington CBD" (Tim Stern, Victoria Uni. Wellington)
- "Bringing the frontier of geological modelling to earthquake ground motion simulation of the basin effect" (Andrew La Croix, University of Waikato)
- "Nationwide investigation of systematic site effects in New Zealand: Residual analysis of physics-based ground motion simulations" (Ayushi Tiwari, University of Canterbury)

Attendees: Chuanbin Zhu, Felipe Kuncar, Chris de la Torre, Ayushi Tiwari, Brendon Bradley, Robin Lee, Juan Jose Sepulveda Garcia, Morteza Abbasnejadfar, Cesar Pajaro (UC), Andrew Stolte, Liam Wotherspoon (UA), Sanjay Bora (GNS), Tim Stern (VUW), Andrew La Croix (Waikato), James Kaklamanos (Merrimack).

'Liquefaction' agenda: 1030-noon NZT: <https://canterbury.zoom.us/j/92535672691>

- Welcome and update

- Liquefaction-induced damage during the Noto Peninsula EQ, Japan: As Reported by Japanese Researchers (Rolly Orense, University of Auckland)
- Numerical simulation of liquefaction and validation of constitutive models (Majid Zakerinia, University of Auckland/ENGEO)
- Machine learning correction of overpredicted liquefaction manifestation using Liquefaction Severity Number (James Russell and Nathan McDougall, T+T)

Attendees: Ribu Dhakal, Sean Rees, Robin Lee (UC), Rolando Orense, Liam Wotherspoon, Andrew Stolte, Arezoo Rahimi, Romain Meite, Kristian Azul (UoA), Kim de Graff (UoW), James Russell, Nathan McDougall (T+T), Duo Li (GNS Science), Majid Zakerinia (UoA/ENGEO)

'Surface rupture and slope stability' agenda: 1230-1400 NZT: <https://canterbury.zoom.us/j/99703191373>

- Welcome and QuakeCoRE opportunities
- Erin McEwan (PhD candidate, UC) – Fault rupture induced river avulsion case studies
- Gavin Anderson (MSc student, UC) – Regional susceptibility analysis for coseismic flooding near faults
- Tim Stahl (on behalf of Joshua Daglish, MSc student, UC) – Road infrastructure exposure to fault displacement hazard

Attendees: Tim Stahl (UC), Erin McEwan (UC), Gavin Anderson (UC), Nicola Litchfield (GNS), Andy Howell (UC/GNS), Mark Stirling (UO), Jack Williams (UO), Laura Gnesko (UC), Duo Li (GNS), Robin Lee (UC), Erin Todd (WSP)

Thursday 30th November 2023

'Liquefaction' agenda: 1030-noon NZT: <https://canterbury.zoom.us/j/92535672691>

- Welcome and update
- Further studies in cyclic characteristics and liquefaction assessment of pumiceous materials (Julia Sit, University of Auckland)
- Influence of pumice on the system response of buildings with shallow foundations under seismic loading(Emma Gardiner, University of Canterbury)
- Centrifuge modelling of highway embankment improved by hybrid-type reinforcement (Chengjiong Qin, Kyushu University)

Attendees: Mark Stringer, Emma Gardiner (UC), Rolando Orense, Andrew Stolte, Arezoo Rahimi, Kristian Azul, Julia Sit (UoA), Kim de Graff (UoW), CY Chin (Beca), Claudio Capellaro (T+T), Chengjiong Qin (Kyushu University)

Thursday 2nd November 2023

'Wellington case study' agenda: 9-1030am NZT: <https://canterbury.zoom.us/j/92660130077>

1. Welcome & Intro (Tom Robinson)
2. Updates from DT1 Strands
 - a. "Strand 1 – Ground shaking" (Brendon Bradley)
 - b. "Strand 2 – Liquefaction" (Ribu Dhakal)
 - c. Strand 3 – Fault Rupture & Slope Stability (Tim Stahl/Tom Robinson)
3. It's Our Fault Overview (Nicola Litchfield)
4. Discussion & Next Steps for Wellington Case Study

Attendees: Tom Robinson, Brendon Bradley, Ribu Dhakal, Claudio Schill, Chris de la Torre, Camilla Penny, Chuanbin Zhu, Felipe Kuncar, Timothy Stahl, Katherine Yates, Ayushi Tiwari, Robin Lee (UC), Nicola Litchfield (GNS), Andy Howell (UC/GNS), Andrew Stolte, Liam Wotherspoon, Amelia Lin (UA), Ricardo Rodriguez Plata (Italy), Govinda Niroula.

Thursday 27th July 2023

'Ground motion' agenda: 9-1030am NZT: <https://canterbury.zoom.us/j/96234512607>

- Welcome and updates (incl QC Annual Meeting info)
- "2023 New Zealand Ground-Motion Database: Quality Controls and resulting dataset examination" (Chuanbin Zhu, University of Canterbury)
- "Methods to account for shallow site effects in hybrid broadband ground-motion simulations" (Felipe Kuncar, University of Canterbury)

Attendees: Chuanbin Zhu, Felipe Kuncar, Vahid Loughman, Chris de la Torre, Ayushi Tiwari, Brendon Bradley, Robin Lee, Claudio Schill (UC), Andrew Stolte, Liam Wotherspoon (UA), Paul Somerville (AECOM), Sanjay Bora (GNS), Didier Pettinga (Holmes Consulting).

'Liquefaction' agenda: 1030-noon NZT: <https://canterbury.zoom.us/j/92535672691>

- Welcome and update
- Cone Penetration Testing to Constrain the Calibration Process of a Sand Plasticity Model for Nonlinear Deformation Analysis (Anna Chiaradonna, University of L'Aquila, Italy)
- Use of innovative materials as ground improvement technique to mitigate liquefaction (Shaswat)

Attendees: Chris de la Torre, Ribu Dhakal, Felipe Kuncar, Sean Rees (UC), Rolando Orense, Andrew Stolte, Arezoo Rahimi, Kristian Azul, Julia Sit, Denny Budiman, Shaswat (UoA), Anna Chiaradonna (University of L'Aquila, Italy), Zheng Li (Univ. Gustave Eiffel)

'Surface rupture and slope stability' agenda: 1230-1400 NZT: <https://canterbury.zoom.us/j/99703191373>

- **Imogen Daysh:** Cyclone Gabrielle landslide mapping and lessons for the next earthquake

- **Jaime Delano:** Probabilistic tectonic displacement hazard for coastal uplift and subsidence
- **Tim Stahl and Colin Bloom:** Project plans and progress for assessing earthquake-induced landslides in the Wairarapa (PI R. Langridge)

Attendees: Imogen Daysh, Tom Robinson, Sam McColl, Arezoo Rahimi, Colin Bloom, Clark Fenton, Govinda Niroula, Joshua Daglish, Jesse Kearse, Rick Wentz, Jaime Delano, Ethan Walsh, Erin McEwan

Thursday 25th May 2023

'Ground motion' agenda: 9-1030am NZT: <https://canterbury.zoom.us/j/96234512607>

- Welcome and update
- ["Initial results of shear-wave reflection profiling in the Wellington CBD"](#) (Tim Stern and Sam Thorpe-Loversuch, Victoria University of Wellington)
- ["Candidate Ground-Motion Models for New Zealand National Seismic Hazard Model Revision \(NSHM-22\) and Associated Hazard Sensitivities"](#) (Sanjay Bora, GNS Science)

Attendees: Brendon Bradley, Chris de la Torre, Robin Lee, Tim Stahl, Felipe Kuncar, Chuanbin Zhu, Claudio Schill (UC), Tim Stern, Sam Thorpe-Loversuch (VUW), Adrian Rodriguez-Marek (VTech), Andrew Stolte, Liam Wotherspoon, Romain Meite (UA), Jim Kaklamanos (Merrimack)

'Liquefaction' agenda: 1030-noon NZT: <https://canterbury.zoom.us/j/92535672691>

- Welcome and update
- [Liquefaction characteristics of sand due to various waves by cyclic torsional shear test](#) (Keisuke Ishikawa, Tokyo Denki University)
- [Preliminary report on the investigation of the damage caused by the 2023 Turkey-Syria earthquake](#) (Keisuke Ishikawa, Tokyo Denki University)

Attendees: Chris de la Torre, Ribu Dhakal, Felipe Kuncar, Robin Lee, Katherine Yates, Sean Rees, Tim Stahl (UC), Rolando Orense, Andrew Stolte, Arezoo Rahimi, Romain Meite, Kristian Azul, Julia Sit, Denny Budiman, Shaswat (UoA), Max Kluger, Jordanka Chaneva (UoW), Keisuke Ishikawa (Tokyo Denki Univ)

Thursday 30th March 2023

'Ground motion' agenda: 9-1030am NZT: <https://canterbury.zoom.us/j/96234512607>

- Welcome and update
- ["Spectral Decomposition of Ground Motions in New Zealand using the Generalized Inversion Technique"](#) (Chuanbin Zhu, University of Canterbury)
- ["Residual Analysis and Non-Ergodic Adjustment to Ground Motion Models for the Wellington Region"](#) (Chris de la Torre, University of Canterbury)

Attendees: Brendon Bradley, Robin Lee, Chuanbin Zhu, Ayushi Tiwari, Chris de la Torre Claudio Schill, Felipe Kuncar (UC), Andrew Stolte, Liam Wotherspoon, Romain Meite (UA), Erin Todd (WSP), Francisco Javier Ornelas (UCLA), Sanjay Bora (GNS).

'Liquefaction' agenda: 1030-noon NZT: <https://canterbury.zoom.us/j/92535672691>

- Welcome and update
- Input Ground Motion Selection for 1D Site Response Analysis at the Port of Wellington (Ribu Dhakal, University of Canterbury)
- Integration of Geotechnical data and Geospatial-based Methods for Liquefaction Assessment (Kristian Azul, University of Auckland)

Attendees: Chris de la Torre, Ribu Dhakal, Felipe Kuncar, Robin Lee, Katherine Yates, Sean Rees, Ayushi Tiwari, Chuanbin Zhu (UC), Rolando Orense, Liam Wotherspoon, Andrew Stolte, Romain Meite, Kristian Azul, Julia Sit, Denny Budiman (UoA), Ricardo Rodriguez Plata (Univ. of Pavia)

'Surface rupture and slope stability' agenda: 1230-1400 NZT: <https://canterbury.zoom.us/j/99703191373>

- Welcome and update
- Open funding opportunities (Tim Stahl, UC)
- Fault displacement hazard exposure (Dr. Colin Bloom and Joshua Daglish, UC)
- Intro to QuakeCoRE MSc projects on earthquake-induced landslide risk (Dr. Tom Robinson on behalf of Imogen Daysh & Julia Harvey, UC)
- Submarine landslides from the Kaikoura earthquake (Laura Gnesko, UC)

Attendees: Laura Gnesko, Colin Bloom, Joshua Daglish, Jaime Delano, Ethan Walsh, Tom Robinson, Sarah Mabin, Erin McEwan, Camilla Penney, Katherine Yates, Corinne Singeisen, Liam Wotherspoon, Kuba Rozmus, Clark Fenton, Russ Van Dissen

Thursday 24th November 2022

'Ground motion' agenda: 9-1030am NZT: <https://canterbury.zoom.us/j/96234512607>

- Welcome and update
- ["Evaluating the Performance of 1D Site-Response Analysis in Ground-Motion Simulations: Insights from Small-Magnitude Events recorded in the Canterbury Region"](#) (Felipe Kuncar, University of Canterbury)
- ["Partially Non-Ergodic Ground Motion Modelling: Lessons Learned from Japan and Implications for New Zealand"](#) (Chuanbin Zhu, University of Canterbury)

Attendees: Felipe Kuncar, Chris de la Torre, Vahid Loghman, Robin Lee, Ayushi Tiwari, Claudio Schill, Chuanbin Zhu, Brendon Bradley (UC), Andrew Stolte, Rolly Orense, Kristian Azul, Romain Meite (UA), Jim Kaklamanos (Merrimack), Jeff Bayless (AECOM).

'Liquefaction' agenda: 1030-noon NZT: <https://canterbury.zoom.us/j/92535672691>

- Welcome and update
- Liquefaction of volcanic soils: Undrained behavior under monotonic and cyclic loading (Martina de Cristofaro, University of Campania, Italy)
- The Importance of 1g Shake Table Testing in Studying Liquefaction-Induced Shallow Foundation Settlement Phenomenon (Ramin Motamed, University of Nevada-Reno, USA)

Attendees: Mark Stringer, Chris de la Torre, Ribu Dhakal, Felipe Kuncar, Robin Lee, Katherine Yates, Emma Gardiner (UC), Rolando Orense, Andrew Stolte, Romain Meite, Arezoo Rahimi, Kristian Azul, Shaswat, Julia Sit (UoA), Kim de Graaf (UoW), Martina de Cristofaro, Lucio Olivares, Emilia Damiano (University of Campania, Italy), Ramin Motamed (University of Nevada-Reno)

'Surface rupture and slope stability' agenda: 1230-1400 NZT: <https://canterbury.zoom.us/j/99703191373>

No meeting this month

Thursday 28th July 2022

'Ground motion' agenda: 9-1030am NZT: <https://canterbury.zoom.us/j/96234512607>

Attendees:

'Liquefaction' agenda: 1030-noon NZT: <https://canterbury.zoom.us/j/92535672691>

- Welcome and update
- Simplified liquefaction triggering assessment of coral-derived carbonate sand (Merrick Taylor, Beca Ltd)
- Sensitivity of CPT-based liquefaction assessment to sleeve friction depth correction (Ribu Dhakal, UC)
- Geotechnical properties of liquefied pumiceous layers in lakes (Jordanka Chaneva, UoW)

Attendees: Mark Stringer, Claudio Cappellaro, Sean Rees, Ribu Dhakal, Felipe Kuncar, Robin Lee (UC), Rolando Orense, Andrew Stolte, Romain Meite, Tahoura Khansari, Kristian Azul (UoA), Jordanka Chaneva, Max Kluger (UoW), Merrick Taylor (Beca), Nathan McDougall (T+T)

'Surface rupture and slope stability' agenda: 1230-1400 NZT: <https://canterbury.zoom.us/j/99703191373>

Attendees:

Thursday 30th June 2022

'Wellington case study' agenda: 9-1030am NZT: <https://canterbury.zoom.us/j/92660130077>

(WIP - tentative at present)

1. Aim of the integrated project
2. Depth and shape of the basement surface beneath Wellington City, based on gravity and seismic constraints (Tim Stern)
3. 3D Ground Motion Simulation-based Site Amplification Considering Multiple Basin Geometries: A Wellington Case Study (Robin Lee)
4. Modelling of infrastructure exposure in Wellington (Amelia Lin)

Attendees:

Thursday 26th May 2022

'Ground motion' agenda: 9-1030am NZT: <https://canterbury.zoom.us/j/96234512607>

- Validation of the NGA-Subduction Ground Motion Models using QuakeCoRE CyberShake Simulations (Scott Condon)
- Ground motion simulation of the 2016 and 2017 Pohang earthquakes in South Korea (Seokho Jeong)

Attendees: Jason Motha, Robin Lee, Chris de la Torre, Vahid Loghman, James Paterson, Brendon Bradley, Claudio Schill, Tim Stahl, Mike Dupuis, Felipe Kuncar (UC), Liam Wotherspoon, Rolando Orense, Andrew Stolte, Kristian Azul (UA), Aasha Pancha (Aurecon), Scott Condon, Jeff Bayless (AECOM), Jim Kaklamanos (Merrimack), Seokho Jeong (Changwon), Tim Stern (VUW)

'Liquefaction' agenda: 1030-noon NZT: <https://canterbury.zoom.us/j/92535672691> (note updated/corrected Zoom link for 2022)

- Welcome
- Numerical Modelling of Structure-Soil-Structure Interaction (SSSI) Affected by Soil Liquefaction (Farbod Yarmohammadi, UoA)

- [Assessment of the performance of empirical correlations based on NZ datasets](#) (Sophia Zhou, UoA)
- [Assessment of the liquefaction potential of loess soils, Banks Peninsula](#) (Katherine Yates, UC)
- Discussion and Updates

Attendees: Brendon Bradley, Gabriele Chiaro, Maxim Millen, Mark Stringer, Claudio Cappellaro, Chris de la Torre, Sean Rees, Ribu Dhakal, Felipe Kuncar, Robin Lee, Katherine Yates, Mohammad Eskandarighadi (UC), Rolando Orense, Liam Wotherspoon, Andrew Stolte, Farbod Yarmohammadi, Sophia Zhou, Tahoura Khansari, Majid Zakerinia, Julia Sit, Kristian Azul (UoA), Sjoerd van Ballegooy (T+T)

'Surface rupture and slope stability' agenda: 1230-1400 NZT: <https://canterbury.zoom.us/j/99703191373>

- Empirical rupture simulation results (Ethan Walsh)
- Landslide Dam Outburst Flood Risk: Modelling the hazard and risk from dam break floods on the West Coast (Jane McMecking)

Attendees: Tim Stahl, Ethan Walsh, Jane McMecking, Rob Langridge, Mark Stirling, Robin Lee, Tom Robinson, Jack Williams, Macey Polwart, Martin Brooks, Camilla Penney, Liam Wotherspoon, Dion Dow

Thursday 31st March 2022

'Ground motion' agenda: 9-1030am NZT: <https://canterbury.zoom.us/j/96234512607>

- [Combining Observed Elastic Basin Amplification Factors with Nonlinear Site Response Analyses: Application to Wellington](#) (Chris de la Torre)
- An H/V Geostatistical Approach for Developing Pseudo-3D Vs Models to Account for Spatial Variability in Site Response (Mohamad Hallal)
- Modeling Multi-Azimuthal 2D Site Response at Treasure Island Downhole Array Using the H/V Geostatistical Approach (Brady Cox)
- [Modelling Local Site Effects in Physics-Based Earthquake Ground Motion Simulations: Thesis Plan](#) (Felipe Kuncar)

Attendees: Chris de la Torre, Brendon Bradley, Robin Lee, Jason Motha, Claudio Schill, Felipe Kuncar, Vahid Loghman (UC), Rolando Orense, Liam Wotherspoon, Andrew Stolte (UA), Brady Cox (UtahState), Andreas Skarlatoudis, Jeff Bayless, Paul Somerville (AECOM), Erin Todd (WSP), Karim Tarbali, John Louie (UNevada), Tim Stern (UVictoriaNZ)

'Liquefaction' agenda: 1030-noon NZT: <https://canterbury.zoom.us/j/92535672691> (note updated/corrected Zoom link for 2022)

- Welcome
- [Discrete element study on undrained cyclic response of pumice sand](#) (Sam Bahmani, Brian Perry Civil)
- [Energy-based liquefaction assessment approach for pumiceous sands](#) (Rolly Orense, UoA)
- Discussion

Attendees: Brendon Bradley, Maxim Millen, Mark Stringer, Chris de la Torre, Sean Rees, Robin Lee, Katherine Yates (UC), Rolando Orense, Liam Wotherspoon, Andrew Stolte, Tahoura Khansari, Majid Zakerinia, Julia Sit, Kristian Azul, Shaswat (UoA), Sjoerd van Ballegooy, Nathan McDougall (T+T), CY Chin (Beca), Rick Wentz (Wentz Pacific Ltd), Kim de Graaf, Max Kluger (UoW), Sam Bahmani (Brian Perry Civil)

'Surface rupture and slope stability' agenda: 1230-1400 NZT: <https://canterbury.zoom.us/j/99703191373>

- Welcome
- Fault rupture PhD project & group discussion
- Landslide MSc projects & group discussion
- Scholarship discussion and timelines
- Coastal Cliff Retreat at Conway Flat and the Influence of the 2016 M_w 7.8 Kaikura Earthquake (Colin Bloom UC)
- Engineering geological characterisation of rock slope failures triggered by the 2016 M_w 7.8 Kaikura earthquake (Corinne Singeisen, UC)
- Discussion

Attendees: Tim Stahl, Tom Robinson, Mark Stirling, Liam Wotherspoon, Brendon Bradley, Robin Lee, Clark Fenton, Erin Todd, Rob Langridge, Jaime Delano, Colin Bloom, Corinne Singeisen, Andy Howell, Chris Massey, Rolando Orense, Laura Gnesko, Romy Ridl

Thursday 27th January 2022

'Ground motion' agenda: 9-1030am NZT: <https://canterbury.zoom.us/j/96234512607>

- Welcome and updates (Brendon Bradley)
- [Inter-period correlations among Cybershake NZ ground motion simulations](#) (Jeff Bayless)
- [Modelling sensitivities for small and moderate magnitude ground motion simulation validation](#) (Robin Lee)
- [Convergence testing of empirical directivity model hypocentre placement and effects on hazard](#) (Claudio Schill)

Attendees: Brendon Bradley, Robin Lee, Chris de la Torre, Vahid Loghman, Claudio Schill, Felipe Kuncar, James Paterson, Mike Dupuis (UC), Jeff Bayless, Paul Somerville, Andreas Skarlatoudis (AECOM), Anna Kowal (Otago), Rolando Orense (UA), Didier Pettinga (Holmes).

'Liquefaction' agenda: 1030-noon NZT: <https://canterbury.zoom.us/j/92535672691> (note updated/corrected Zoom link for 2022)

- Welcome and updates (Rolly Orense)
- Influence of liquefiable sites with and without remedial ground densification on ground motion amplification and seismic demand (Romain Meite, UoA)

- [Pseudo-static analysis of inclined pile foundations in OpenSees](#) (Yuri Wong, Engineering Geology)
- Simulated ground motions validation using a geotechnical system involving liquefaction (Tahoura Khansari, UoA)
- Discussion

Attendees: Brendon Bradley, Claudio Capellaro, Chris de la Torre, Felipe Kuncar, Robin Lee (UC), Rolando Orense, Liam Wotherspoon, Connor Hayden, Andrew Stolte, Romain Meite, Tahoura Khansari, Majid Zakerinia (UoA), Sjoerd van Ballegooy (T+T), Yuri Wong (EGL), Kim de Graaf (UoW)

'Surface rupture and slope stability' agenda: 1230-1400 NZT: <https://canterbury.zoom.us/j/99703191373>

- Welcome and updates (Tim Stahl)
- Automated fault mesh generation (Andrew Howell, GNS, UC)
- Discussion + Scholarships

Attendees: Tim Stahl, Andrew Howell, Mark Stirling, Corinne Singeisen, Colin Bloom, Tom Robinson, Laura Gnesko, Rick Wentz, Rolando Orense, Liam Wotherspoon, Robin Lee, G. Nirouva.

Thursday 25th November 2021

'Ground motion' agenda: 9-1030am NZT: <https://canterbury.zoom.us/j/96234512607>

- Welcome and updates (Brendon Bradley)
- [The 2021 NZ Ground Motion Database and next steps](#) (Jesse Hutchinson, 25min)
- [Recent progress on the NZ Velocity Model: North Island Tomography and regional basin model updates](#) (William Lee, Robin Lee, Andrew Stolte, 25min)
- [Cybershake NZ calculations with a 1Hz transition frequency](#) (Jason Motha, 25min)

'Liquefaction' agenda: 1030-noon NZT: <https://canterbury.zoom.us/j/96086277275>

- Welcome and update (Rolly Orense)
- [Mitigation of soil liquefaction using biochar](#) (Gislaine Tobar, Beca, 15min)
- [Liquefaction Fragility Functions for NZ Houses](#) (Nathan McDougall, T+T, 30min)
- [Liquefaction characteristics of sand-gravel mixtures: insights from laboratory tests](#) (Abilash Pokhrel, UC, 15min)
- Highlights and Discussion

Attendees: Claudio Capellaro, Abilash Pokhrel, Andrew Stolte, Chris dela Torre, Sean Rees, Gabriele Chiaro, Ribu Dhakal, Felipe Kuncar, Katherine Yates, Robin Lee (UC), Rolando Orense, Liam Wotherspoon, Majid Zakerinia (UoA), Sjoerd van Ballegooy, Nathan McDougall, James Russell, Ben Francis, Guy McDougall (T+T), Gislaine Tobar, CY Chin, Ali Tasalloti (Beca), Kim de Graaf (UoW)

'Surface rupture and slope stability' agenda: 1230-1400 NZT: <https://canterbury.zoom.us/j/99703191373>

A. Pro. Liam Wotherspoon (UoA): Seismic and co-seismic hazard exposure of national flood defence networks

Corinne Singeisen (PhD candidate, UC): Failure mechanisms of landslides triggered by the 2016 Kaikura earthquake

Matt Cook (PhD candidate, UoA): Gisborne November 2021 post storm event landslide risk assessment

Dr. Tom Robinson (UC): Post-seismic evolution of landslide hazard and risk in Nepal following the 2015 earthquake

Attendees: Tom Robinson (chair), Liam Wotherspoon, Corrine Singeisen, Colin Bloom, Matt Cook, Andy Howell, Chris Massey, Clark Fenton, Jaime Delano, Erin Murray, Robin Lee, Rob Langridge, Laura Gnesko, Sam McColl

Thursday 28th October 2021

'Wellington case study' agenda: 9-1030am NZT: <https://canterbury.zoom.us/j/92660130077>

1. Aim of the integrated project
2. Scope and alignment with other efforts
 - Its Our Fault research programme and partnerships (Chris M)
3. Technical presentations
 - a. [CPT-based simplified and advanced liquefaction assessment of CentrePort gravelly reclamations](#) (Ribu Dhakal)
 - b. [Landslide modelling in the Wellington region](#) (Chris Massey)
 - c. [Paleoseismicity of the Papatea Fault and implications for Kaikoura-sized events](#) (Rob Langridge)

Attendees: Tim Stahl, Rolando Orense, Liam Wotherspoon, Rick Wentz, Paul Sommerville, Claudio Cappellaro, Ribu Dhakal, Chris Massey, Rob Langridge, Colin Bloom, Laura Gnesko, Jaime Delano, Robin Lee, Anne Hulsey, Mark Stirling, Sam McColl, Maxim Millen, Felipe Kuncar

Thursday 30th September 2021

'Ground motion' agenda: 9-1030am NZT: <https://canterbury.zoom.us/j/96234512607>

- Intro on presentations on subduction zone GM simulation (Brendon Bradley, 5min)
- [Ground motion simulations of M9 Cascadia earthquakes](#) (Art Frankel, 15min)

- [Simulation of the Ferndale, California and Geiyo, Japan, slab earthquakes](#) (Arben Pitarka, 15min)
- [Overview of AECOM projects related to subduction earthquake simulations](#) (Jeff Bayless, 15min)
- [Validation of subduction ground motion simulations in New Zealand](#) (Mike Dupuis, 20min)
- [Simulation of M8-9 Hikurangi interface earthquakes](#) (James Paterson / Brendon Bradley, 5min)
- [Points of discussion for kinematic source representation and validation of subduction earthquakes](#) (Moderated Discussion) (15min)

Attendees: Brendon Bradley, Robin Lee, James Paterson, Mike Dupuis, Chris de la Torre, Andrew Stolte, Jason Motha, Felipe Kuncar (UC), Art Frankel, Rob Graves (USGS), Arben Pitarka (LLNL), Jeff Bayless (AECOM), Rolando Orense (UA), Tim Stahl (UC), Erin Todd (Golder/WSP).

'Liquefaction' agenda: 1030-noon NZT: <https://canterbury.zoom.us/j/96086277275>

- Welcome and Introduction (Rolly Orense)
- [Overview of critical state soil models for dynamic analysis](#) (Maxim Millen, UC)
- Geotechnical properties of liquefied pumiceous layers in lakes (Jordanka Chaneva, UoW)
- [Assessment of liquefaction hazard of reclaimed land in Wellington](#) (Claudio Capellaro, UC)
- [Regional mapping and site-specific validation of liquefaction vulnerability of South Auckland deposits](#) (Omer Altaf, UoA)
- Highlights and Discussion

Attendees: Claudio Capellaro, Abilash Pokhrel, Andrew Stolte, Maxim Milen, Mark Stringer, Chris dela Torre, Sean Rees, Chris McGann, Gabriele Chiaro, Ribu Dhakal, Felipe Kuncar, Katherine Yates (UC), Rolando Orense, Liam Wotherspoon, Majid Zakerinia, Omer Altaf, Tahoura Khansari (UoA), Sjoerd van Ballegooy, Nathan McDougall (T+T), CY Chin, Ali Tasalloti (Beca), Rick Wentz (Wentz Pacific Ltd), Max Kluger, Jordanka Chaneva (UoW)

'Surface rupture and slope stability' agenda: 1230-1400 NZT: <https://canterbury.zoom.us/j/99703191373>

- Welcome and Introduction (Tim Stahl)
- Ground surface fault rupture hazard and its mitigation: examples of damage inflicted by surface fault rupture to NZ residential (and residential-type) structures (Russ van Dissen, GNS)
- Empirical simulation of surface rupturing earthquakes in North Canterbury (Ethan Walsh, UC)
- Southland earthquake sources (Mark Stirling, UO)
- Surface deformation in the 1987 Edgecumbe EQ from historical aerial imagery (Jaime Delano, UC)
- Discussion and Comments
- ToR and QC2 Request for Proposals

Attendees: Tim Stahl, Jaime Delano, Ethan Walsh, Corinne Singeisen, Brendon Bradley, Tom Robinson, Max Kluger, Rick Wentz, Liam Wotherspoon, Rolando Orense, Erin Todd, Mark Stirling, Rob Langridge, Russ Van Dissen

Thursday 26th August 2021

'Wellington case study' agenda: 9-1030am NZT: <https://canterbury.zoom.us/j/92660130077>

1. Aim of the integrated project
2. Scope and alignment with other efforts
 - Prior QC1 "Wellington Collaboratory" effort (Brendon)
 - Its Our Fault research programme and partnerships (Chris M?)
 - Other QC2 efforts that could be 'users' of outcomes from this work (Liam)
3. Integrated hazards to consider
 - a. Surface fault rupture
 - b. Ground motion, incl basin and nonlinear site response (Brendon)
 - c. Liquefaction (Rolly)
 - d. Slope stability (landslides) (Chris M, Tom R)
 - e. Permanent displacement effects on rivers, coastal inundation due to static fault disp and/or lateral spreading (Tom, Russ?)

Thursday 29th July 2021

'Ground motion' agenda: 9-1030am NZT: <https://canterbury.zoom.us/j/96234512607>

- [Overview of new DT1 programme and opportunities for involvement and collaboration](#) (Brendon Bradley, 15min)
- [Organisation of DT1 ground motion calls](#) (Brendon Bradley, 2min)
- Selected presentations of current aligned research:
 - [Past, Present, and Future of 2D Site Response with Soil Heterogeneity](#) (Chris de la Torre, 10min)
 - [Simulation Inputs: Site characterisation, basin modelling, and the New Zealand Velocity Model](#) (Andrew Stolte, 10min)
 - [Ground motion simulation validation overview](#) (Robin Lee, 10min)
- Presentations of potential research foci within this programme:
 - [One pager thoughts](#) (David Dempsey, 5min)
 - [Ground Motion Simulations: needs for acceptance in practice](#) (Jeff Bayless, 10min)

Attendees: Chris de la Torre, Brendon Bradley, Andrew Stolte, Jason Motha, Robin Lee, Maxim Millen, Mohammad Eskandarighadi, David Dempsey, Vahid Loghman, Mike Dupuis, Reagan Chandramohan, Felipe Kuncar, Chris McGann, Tom Son, James Paterson, Claudio Schill (UC), Anne Hulsey, Liam Wotherspoon, Rolando Orense (UA), Erin Todd, Jeff Fraser (Golder/WSP), Paul Somerville, Jeff Bayless (AECOM), Karim Tarbali (UCL)

'Liquefaction' agenda: 1030-noon NZT: <https://canterbury.zoom.us/j/96086277275>

- [Overview of new DT1 programme and opportunities for involvement and collaboration](#) (Rolly Orense, 15min)
- [Organisation of DT1 soil liquefaction calls](#) (Rolly Orense, 2min)
- Selected presentations of current aligned research
 - [Dynamic Site Characterisation: Opportunities for Liquefaction Research](#) ((Andrew Stolte, 10min)
 - [Tephra-Seismites: New insight into Hamilton's seismic risk](#) (Max Kluger, 10min)
 - [Stress density model validation: calibration and preliminary 2D results](#) (Majid Zakerinia, 10min)
 - [Challenges in determining reference input ground motions for site response analyses and applicability to site/basin response analyses in Wellington](#) (Chris de la Torre, 10min)
- Presentations of potential research foci within this programme:
 - Investigation of cyclic behaviour of pumiceous sands and silts of the Waikato and Bay of Plenty, and diatomaceous silts of Rotorua (Kim de Graaf, 6 min)

Attendees: Brendon Bradley, Tim Stahl, Claudio Capellaro, Abilash Pokhrel, Andrew Stolte, Maxim Milen, Chris dela Torre, Sean Rees, Chris McGann, Ribu Dhakal, Robin Lee, Felipe Kuncar (UC), Rolando Orense, Liam Wotherspoon, Connor Hayden, Majid Zakerinia, Omer Altaf, Tahoura Khansari (UoA), Sjoerd van Ballegooy, James Russell, Nathan McDougall (T+T), CY Chin (Beca), Kim de Graaf, Max Kluger, Jordanka Chaneva, David Lowe (UoW)

'Fault rupture + landslides' agenda: 1230-2pm NZT: <https://canterbury.zoom.us/j/99703191373>

- Overview of new DT1 programme and opportunities for involvement and collaboration (Brendon Bradley, 15min)
- Overview of new 'Surface rupture and slope stability' section (Tim Stahl, 10min)
- Selected presentations with slope stability focus
 - Sam McColl - Large structurally-controlled landslides in the North Island
 - Colin Bloom - Using machine learning to untangle variables influencing coseismic landslides
 - Laura Gnesko - Submarine slope failure in the 2016 Kaikoura earthquake

Attendees: Tim Stahl (UC), Brendon Bradley (UC), Sam McColl (Massey), Erin Murray (UC), Rob Langridge (GNS), Mark Stirling (UO), Jaime Delano (UC), Laura Gnesko (UC), Ethan Walsh (UC), Martin Brook (UoA), Rolando Orense (UoA), Colin Bloom (UC), Corinne Singeisen (UC), Andrew Howell (GNS), Claudio Schill (UC), Max Kluger (UoW), Jordanka Chaneva