

Click presentation titles for presentation abstracts

Colour key/Themes below:

Keynotes	Planning & People	Ports & Infrastructure	Science	Nature & Ecosystems	Student Presenters
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Time	Tuesday 19 November		
6:00 - 7:00pm	Registration		
6:00 – 9.00pm	Ice Breaker Function Botanic, The Terrace, Level 1, 126 Oxford Terrace, Christchurch		
Time	Wednesday 20 November		
7.30 – 9.00am	Eric Verstappen Emerging Professionals Breakfast Tower Room at Chateau on the Park		
	Bought to you by:  Jacobs Challenging today. Reinventing tomorrow.		
8:00 – 9.00am	Registration & Coffee		
9:00 – 9.20am	Mihi Whakatau – Welcome and Conference Opening Ngai Tuahuriri, NZCS Conference Chair, Derek Todd, Cr Greg Byrnes (ECan)		
9.20 – 10.20am	<p style="text-align: center;">Keynote Great Hall 2/3</p> <p style="text-align: center;">Debbie Tikao - <i>Te kori a te kō redefining our sustainable, prosperous future</i></p>		
10.20 – 10.50am	Morning Tea		
SESSION 1	Coastal Transformation – Special Session Great Hall 2/3 Chair: Cannon Andrews	Ports and Protection Tower Room Chair: Iain MacDonald	Science of Physical Processes & Data Collection Great Hall 1 Chair: Martin Single
10.50am	Increased exposure of marae to coastal flooding with sea level rise and adaptation learnings of Ngāi Tamawhariua and Maketū Iwi Collective <u>Akuhata Bailey-Winiata</u> – Pattle Delamore Partners	Blocks vs Rocks: Construction Lessons from Te Ara Tupua Hayden Sander – Tonkin & Taylor	Historic Data vs Bruun Rule - Alternate Methodology for Predictions of Soft Sediment Shoreline Retreat due to Sea Level Rise Craig Davis – Davis Coastal Consultants

11.10am	Short-term defence for long-term retreat in the Coromandel Sian John - Haskoning NZ	Evaluating EcoReef: An Economical Approach to Mitigate Coastal Erosion in Cape Palliser Charlotte Duke - Jacobs	Urban Beach Responses to Wave Conditions and Storms in Auckland <u>Bernadette Yafar</u> – University of Auckland
11.30am	Improving our relationship with the coast: collaborative climate action at Waihi Beach Ana Serrano- Bay of Plenty Regional Council	Unravelling sediment transport pathways in a complex ebb-tidal delta and predicting channel sediment infill Mariana Cussioli – MetOcean Solutions	Deep learning in the shallows: An automated approach to mapping variability of hāpua morphodynamics in Aotearoa New Zealand <u>Alaina Baker</u> – University of Canterbury
11.50am	A new national typology of coastal change for Aotearoa New Zealand Megan Tuck – University of Auckland	Modelling complex wave environments and novel armour protection: Insights from recent NZ-based physical model projects Jonathan Chan - UNSW Water Research Laboratory	Enhancing coastal monitoring through morphological analysis and satellite imagery: A case study in Hawke's Bay <u>Sarra Ekladios</u> - University of Auckland
12.10pm	Coastal Erosion Hazard Management - what have we learned since the 1970s? Bronwen Gibberd – 4D Environmental Ltd	Repurposing newly-claimed seascapes in the New Zealand context Faye White – Lincoln University	From smartphones to satellite: leveraging different imagery technologies to monitor coastal change and support coastal management Fred Chaaya - UNSW Water Research Laboratory

12.30 – 1.30pm **Lunch**

1:30 – 5.30pm

Field Trips

- Northern Tour
- Christchurch Walking Tour
- Whakaraupō Lyttelton Harbour Cruise
- Eastern Christchurch


Bought to you by:




5.30 – 7.30

NZCS/PIANC Young Professionals Networking
 The Craft Embassy, The Terrace, Level 1, 126 Oxford Terrace, Christchurch

Bought to you by:



Time	Thursday 21 November	
8:00 – 8:55am	Registration and Tea Coffee	
9:00 – 10.00am	<p style="text-align: center;">Keynote Great Hall 2/3</p> <p style="text-align: center;">Dr Rob Young - <i>The United States East Coast enters the Anthropocene: Engineered sediment fluxes overwhelm natural sediment fluxes</i></p> <div style="text-align: right;">  <p>Bought to you by:</p> </div>	
SESSION 2	<p style="text-align: center;">Lightning Talks / Poster Session Great Hall 2/3 Chair: Sian John</p>	<p style="text-align: center;">Science, Sediments and Extreme Events Great Hall 1 Chair: Scott Stephens</p>
10.00am	<p>Lightning Talks</p> <ul style="list-style-type: none"> • Alfredo Jaramillo, Massey University - <i>“An evaluation of Citizen Science approaches to monitor landslides and reduce the associated community risk in coastal cliff environments”</i> • Tommaso Alestra, Boffa Miskell Ltd - <i>“Production and trial of artificial rock pools at Lyttelton Port Company”</i> 	<p>The Impact of Extreme Weather Events on Estuarine Sediment Pathways and Estuarine Infilling <u>Sanne Vaassen</u> – University of Auckland</p>
10.20am	<ul style="list-style-type: none"> • Hayley Swan, Stantec - <i>“Restoration Plan for Te Awarua-o-Porirua”</i> • Ruby Mckenzie Sheat, NIWA - <i>“Integrating Mātauranga Māori into Science-based Flood Risk Models”</i> • Constanza Flores, University of Canterbury - <i>“Agent models of tsunami evacuation behaviour to improve planning and preparedness”</i> • Bruce Dudley, NIWA - <i>“Hindcasting estuary ecological states using sediment cores, modelled historic nutrient loads, and a Bayesian network for informed management”</i> • Paul Hart, Bluemont - <i>“Bluemont Rock Bags for Coastal Flood & Erosion Protection”</i> • Fred Waiker, EcoReef - <i>“Ecoreef”</i> • Dr Alan Orpin, NIWA - <i>“Kaharoa II – A new vessel for coastal research”</i> • Darren Hocken, Eliot Sinclair - <i>“Surveying the Gap”</i> <p>Posters (no-lightning talk)</p> <ul style="list-style-type: none"> • Rebecca Welsh, NIWA - <i>“Climate-induced Sea-Level Rise Inundation Exposure and Losses in Pacific Island Contexts”</i> 	<p>Cyclone Gabrielle sediment impacts on the seabed environment off Te Matau a Māui/Hawke’s Bay and Tairāwhiti/Gisborne coasts Alan Orpin - NIWA</p>

- **Lucy Coulston, University of Canterbury** – “The importance of tino rangatiratanga and Mātauranga Māori for eco-cultural resilience: A comparison of highly modified coastal lagoons”
- **Amandine Bosserelle, University of Canterbury** – “Sea-level rise effects on coastal shallow groundwater dynamics in the built environment”
- **Connor Cleary, University of Canterbury** – “Modelling the Influence of Coastal Geology on Seawater Intrusion in New Zealand”

Bought to you by:

Boffa Miskell




10.40 – 11.10am		Morning Tea		
SESSION 3	People and Coasts Great Hall 2/3 Chair: Amy Robinson	Mapping Tower Room Chair: Terry Hume	Nurturing Nature Great Hall 1 Chair: Deirdre Hart	
11.10am	Factors that influence the local coastal knowledge of surfers in Aotearoa <u>Oakley Campbell</u> - Lincoln University	3D Coastal Mapping – Improving key baseline datasets Stuart Caie - Toitū Te Whenua Land Information New Zealand	Nature's Shield 1: The Wi Neera to Onepoto Project – Engineering Differently Michael Paine - Tonkin & Taylor	
11.30am	“Sign new lease or face eviction: D-day looms for Selwyn Huts residents” Monique Eade - Jacobs	Seeing the seafloor: can we do better? Sam Davidson - NIWA	Nature's Shield 2: Leveraging Saltmarsh Vegetation for Coastal Protection Holly Blakely – Tonkin & Taylor	
11.50am	How can a hierarchical geomorphic framework be used to improve coastal management on the East Otago Coast? <u>Ruby Hudson</u> - University of Otago	Producing a nationwide hydrologically conditioned DEM Rose Pearson - NIWA	A community of practice for carbon storage in coastal wetlands around Aotearoa New Zealand Joe Prebble – GNS Science	
12.10pm	A landowner's guide to coastal erosion Alison Clarke – SLR Consulting Ltd	Using low-cost GNSS receivers for precise measurements in the marine environment Emily Tidey - University of Otago	Forests on the brink: exploring the fate of Pacific atoll mangrove forests under rising seas Andrew Swales - NIWA	
12.30 – 1.30pm		Lunch		
SESSION 4	Science of Waves Great Hall 2/3 Chair: Colin Whittaker	Planning Tower Room Chair: Hamish Rennie	Ecology, Indigenous knowledge and Mātauranga Maori Great Hall 1	

			Chair: Christo Rautenbach
1.30pm	25-years of wave monitoring offshore of Steep Head, Te Pātaka-o-Rākaihautū/Banks Peninsula Cyprien Bosserelle - NIWA	What matters most... thresholds? Laura Robichaux - BECA	Ancient and contemporary community coastal structures in Australia James Carley – UNS Water Research Laboratory
1.50pm	Wave Forecast Investigations around Aotearoa New Zealand Rafa Santana - NIWA	Dynamic adaptive pathways planning for adaptation: Lessons learned from a decade of practice in Aotearoa New Zealand Judy Lawrence and Shari Gallop (Co-Presenters) - Victoria University and Pattle Delamore Partners	Building a reef as part of a major infrastructure project, Te Ara Tupua, Wellington Marcus Cameron – Tonkin & Taylor
2.10pm	South Island Wave Monitoring Network: Updates and one year of data Sarah McSweeney – University of Canterbury	Adaptive tools for coastal infrastructure adaptation in an uncertain climate Andrew Allison - NIWA	Rewilding Bluff Harbour via active marine restoration: Sea Nest/Kōhanga Moana Pilot Study Bryony Miller - e3Scientific Ltd
2.30pm	On the use of regression models to reconstruct time series of wave buoy data in Hawke’s Bay Joao Albuquerque – Hawkes Bay Regional Council	Adaptation knowledge sharing: how the ACAN and PEERS communities of practice are helping bridge the science-policy-implementation gap Matthew de Boer – PEERS Oceania	Coastal resilience AND coastal enhancement: could a chenier ridge enhance ecological and cultural values of Thames whilst saving money on rocks and protecting houses? Jamie Boyle and Shari Gallop - Thames Coromandel District Council and Pattle Delamore Partners
2.50pm	Modelling dynamic inundation from waves Eddie Beetham – Tonkin & Taylor	Some pitfalls of a risk-based approach to adaptation planning Rob Bell – Bell Adapt Ltd	A collaboration of mātauranga Māori and western science for monitoring of Pipi (Paphies australis) in Tauranga Harbour Tyla Kettle – Boffa Miskell
3.10 – 3.40pm	Afternoon Tea		
SESSION 5	Planning for Hazards Great Hall 2/3 Chair: Mark Ivamy	Wave and Storm Impacts Tower Room Chair: Mark Dickson	Ecosystems and Environments Great Hall 1 Chair: Tomasso Alestra
3.40pm	Auckland Council’s Coastal Monitoring Program Aidan McLean - Auckland Council	Wave impacts on cliffs and vertical structures: Lessons from the lab and the field Colin Whittaker - University of Auckland	Monitoring of Environmental Change due to Conversion of Oyster Farms from Traditional Racks to the Innovative Flip-Farm System Shaw Mead - eCoast

<p>4.00pm</p>	<p>Christchurch City Council’s Coastal Hazard Adaption Planning Team – The What Why and How Rachel Wilson - Christchurch City Council</p>	<p>Cliff erosion due to swash abrasion: An experimental investigation Yaxiong Shen - University of Auckland</p>	<p>Setting "limits" or values for estuaries: Opportunities and lessons learnt Anna Madarasz-Smith - Pattle Delamore Partners</p>
<p>4.20pm</p>	<p>Up, down and all around. An overview of Environment Canterbury’s coastal hazard monitoring program Bruce Gabites - Environment Canterbury</p>	<p>The Importance of Storm Duration and Antecedent Beach Conditions in Storm Damage, July 2023 Storm at the Clutha Mouth, Otago Derek Todd - Jacobs</p>	<p>Applying the Ecological Impact Assessment Guidelines to a critical infrastructure project in the marine environment Daniel Ahern – SLR Consulting</p>
<p>4.40pm</p>	<p>Applying an understanding of vertical land movement in post-quake Christchurch Tom Simons-Smith – Christchurch City Council</p>	<p>How important are Ex-Tropical Cyclones in the erosion of marine terraces? Sophie Horton – University of Canterbury</p>	<p>Observations and alterations of the opening regime of te Roto o Wairewa: New salinity observations and effects of a proposed fish passage Justin M Rogers – University of Canterbury</p>

<p>6.00 - Late</p>	<p style="text-align: center;">Conference Dinner The Beach – Sumner, 25 Esplanade Sumner, Christchurch</p> <div style="text-align: right;">  <p>Bought to you by:</p> </div>
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Friday 22 November			
9.00 – 10.00am	<p>Keynote Great Hall 2/3</p> <p>Leanne Morgan - Impacts of sea-level rise on coastal groundwater</p>		
SESSION 6	<p>Blue Science Great Hall 2/3 Chair: Bruce Gabities</p>	<p>Forecasting Science Tower Room Chair: Rob Bell</p>	<p>Science of Plastics Great Hall 1 Chair: Matt Balkham</p>
10.00am	<p>Groundwater hazards and impacts of sea-level rise on coastal low-elevation zone: Perspectives of practitioners Amandine Bosserelle – University of Canterbury</p>	<p>Operational high-resolution storm tide model for New Zealand (NZ-StormTide) Glen Reeve - NIWA</p>	<p>Carparks to Cockles-Plastic Pollution Pathways in Te Taitokerau (Northland) Nick Bamford – Northland Regional Council</p>
10.20am	<p>Towards a national shallow groundwater hazard exposure assessment: statistical modelling of water table depth in New Zealand’s coastal lowlands Zeb Etheridge - Komanawa Solutions Ltd</p>	<p>Forecasting inundation maps in real-time with machine learning: A Westport case-study Deidre Cleland - NIWA</p>	<p>Quantification and Characterisation of Microplastics in Remote Fiords’ and Highly Populated Harbours, Two Extremes of Aotearoa - New Zealand Hayden Masterton - Institute of Environmental Science and Research</p>
10.40am	<p>Morning Tea</p>		
SESSION 7	<p>Infrastructure Risks Great Hall 2/3 Chair: Laura Robichaux</p>	<p>Beach Behaviour Tower Room Chair: Sam Morgan</p>	<p>Tsunami’s and Extreme Sea Level Great Hall 1 Chair: Emily Lane</p>
11.10am	<p>How to design trigger levels for adaptation using mean sea level measurements Zhonghou Xu - NIWA</p>	<p>What’s in a shoreline? From single to multi-proxy coastal change assessment Mark Dickson – University of Auckland</p>	<p>Tsunami-tide interaction in Foveaux Strait and Bluff Harbour Gael Arnaud - MetService</p>
11.30am	<p>Coastal Flooding Impacts on New Zealand’s Interdependent Infrastructure Networks Conrad Zorn – University of Auckland</p>	<p>The Beach is Back! A story of natural shoreline recovery after Cyclone Gabrielle Kate MacDonald - Jacobs</p>	<p>How coastal ecosystems can help to mitigate tsunami impact in New Zealand? Jean Roger – GNS Science</p>
11.50am	<p>Climate change risk to supply chains – national road distribution from ports Chris Cameron – Pattle Delamore Partners</p>		<p>Predicting the likelihood of multi-hazard events in NZ Scott Stephens - NIWA</p>
12.10 – 1.10pm	<p>Lunch NZCS AGM Great Hall 2/3</p>		

SESSION 8	<p>The Future of our Coasts Great Hall 2/3 Chair: Sarah McSweeney</p>	<p>Great Hall 1 Chair: Hugh Leersnyder</p>
<p>1.10pm</p>	<p>Panel Workshop</p> <p>Part 1: 'Protecting the future: Engaging children and young people in climate policy and action' <i>Presenters: Sian Carvell (Future Curious), Keegan Verster (16yrs, Next Generation Conversation); Bronte Fitzhardinge (13yrs, Next Generation Conversation).</i> Sian, Bronte and Keegan will share their experiences and expertise on climate change education and the value of an intergenerational equity approach to climate change policy and action.</p>	<p>Investigating the connection between metocean conditions and boating safety: An analysis of incident data Christo Rautenbach - NIWA</p>
<p>1.30pm</p>	<p>Part 2. "Hopes and Challenges for the Future of Our Coast: A panel discussion <i>Presenters: Alaina Baker (University of Canterbury, NZCS Scholarship winner 2024), Sanne Vaassen (University of Auckland, NZCS Scholarship winner 2024), Keegan Verster (16yrs, Next Generation Conversation, Bronte Fitzhardinge (13yrs, Next Generation Conversation).</i> In this panel the voices of our next generation will discuss some of the key challenges they see for the New Zealand coastal environment and communities and their hopes for the future. We welcome discussion between the panel but also with the audience</p>	<p>Mataikona Road Coastal Resiliency Study Ryan Abrey - Stantec</p>
<p>1.50pm</p>	<p>Bought to you by:</p> 	<p>Field Monitoring and its Role in Advancing Complex Hydrodynamic Modelling at Te Wai Manawa Little Shoal Bay Peter Quilter – Tonkin & Taylor</p>
<p>2.10pm</p>	<p>End Note Great Hall 2/3</p> <p>Fernando Mendez - Compound coastal flooding risk in a changing climate in areas affected by extra tropical and tropical cyclones</p>	
<p>2.50 - 3.10pm</p>	<p>Conference Awards and Closing</p>	