



# Conference 2025

**18–21 November**  
**Ahuriri Napier**

## PROGRAMME

# View Abstract Booklet

**Conference WIFI:** Network name is “Napier Conferences & Events Wifi” and there is no password, delegates just need to accept terms and conditions to proceed

## Session Theme & Type Legend

|          |                     |                          |         |                       |                    |                  |
|----------|---------------------|--------------------------|---------|-----------------------|--------------------|------------------|
| Keynotes | Planning and People | Ports and Infrastructure | Science | Nature and Ecosystems | Student Presenters | Networking Event |
|----------|---------------------|--------------------------|---------|-----------------------|--------------------|------------------|

# Tuesday 18 November

|               |                                                                                |  |  |  |  |
|---------------|--------------------------------------------------------------------------------|--|--|--|--|
| 6.00 – 7.00pm | Registration                                                                   |  |  |  |  |
| 6.00 – 9.00pm | <b>Icebreaker Function</b><br>The National Aquarium, 546 Marine Parade, Napier |  |  |  |  |

Brought to you by



# Wednesday 19 November

|                 |                                                                                                                                        |                                                                                                                                                                                                     |                                                                                                                                                                               |                   |                                                                                      |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------|
| 7.30 – 9.00am   | <b>Eric Verstappen Emerging Professionals Breakfast</b><br>Elicious Eatery, 19 Clive Square West, Napier                               |                                                                                                                                                                                                     |                                                                                                                                                                               | Brought to you by |   |
| 8.00 – 9.00am   | Registration and tea/coffee                                                                                                            |                                                                                                                                                                                                     |                                                                                                                                                                               |                   |                                                                                      |
| 9.00 – 9.20am   | <b>Mihi Whakatau – Welcome and Conference opening</b><br>Natusch Ball Room                                                             |                                                                                                                                                                                                     |                                                                                                                                                                               |                   |                                                                                      |
| 9.20 – 10.20am  | <b>Keynote</b><br>Natusch Ball Room<br>Hinewai Ormsby (TBC)                                                                            |                                                                                                                                                                                                     |                                                                                                                                                                               | Brought to you by |  |
| 10.20 – 10.50am | Morning Tea                                                                                                                            |                                                                                                                                                                                                     |                                                                                                                                                                               |                   |                                                                                      |
| Session 1       | <b>Coastal Hazards</b><br>Natusch Ball Room<br>Chair - Megan Tuck                                                                      | <b>Beyond New Zealand</b><br>Breakout Room 1<br>Chair – Ana Serrano                                                                                                                                 | <b>Water quality and ecology</b><br>Breakout Room 2<br>Chair – Bryony Miller                                                                                                  |                   |                                                                                      |
| 10.50 – 11.10am | <b>NZTA Coastal Hazards Guide for Land Transport Infrastructure</b><br>David Greig, NZTA                                               | <b>The effects of structural complexity on the turbulent structure around cubic artificial reefs: An Experimental Study with Ecological Insights</b><br><u>Jialin Zhao</u> , University of Auckland | <b>An assessment of the threats and vulnerabilities of pīkiao (Ficinia Spiralis) in Ōtākou (Otago)</b><br><u>Rose Somerville</u> , University of Otago                        |                   |                                                                                      |
| 11.10 – 11.30am | <b>A design approach for rock sizing revetments in beyond shallow conditions</b><br><u>Ben Batchelor-Cook</u> , University of Auckland | <b>Flood resilience in Fiji’s coastal villages through integrated modelling and nature-based solutions</b><br>Joao Castro, eCoast                                                                   | <b>Seagrass (Zostera Muelleri) recovery and seasonal dynamics following sand excavation in Matapouri Estuary, New Zealand</b><br>Pamela Kane-Sanderson,<br>SLR Consulting Ltd |                   |                                                                                      |



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| 11.30 – 11.50am  | <b>Designing a temporary beach structure to mitigate swash energy during storms</b><br>Catriona Thompson, University of Auckland                                                        | <b>Adaptive design and long-term planning: Building resilience in Pacific atoll nations</b><br>Holly Blakely, Tonkin + Taylor       | <b>From glory to gutter – our degrading Manukau Harbour water</b><br><u>Harper Spurway</u> , Avondale College                                     |
| 11.50 – 12.10pm  | <b>End-of-century shoreline change projections in Aotearoa New Zealand: Our changing coasts project</b><br><u>Eduardo Gomez-de la Pena</u> , University of Auckland                     | <b>Integrated pedestrian and car agent-based models of tsunami evacuation</b><br><u>Constanza Flores</u> , University of Canterbury | <b>Enabling coastal stewardship: The role of taxonomy in marine monitoring and biosecurity</b><br>Paul Wolf, Ocean Wolf                           |
| 12.10 - .12.30pm |                                                                                                                                                                                         | <b>Evacuation behaviour during tsunamis in Sri Lanka</b><br>Chamika Kannangara, RMIT University, Australia                          | <b>After the storm: Impacts of Cyclone Gabrielle on sedimentation and estuarine communities</b><br>Georgina Flowers, Hawke’s Bay Regional Council |
| 12.30 – 1.30pm   | <b>Lunch</b>                                                                                                                                                                            |                                                                                                                                     |                                                                                                                                                   |
| 1.00 – 2.00pm    | <b>NZCS AGM (all welcome)</b>                                                                                                                                                           |                                                                                                                                     |                                                                                                                                                   |
| 2.15 – 5.00pm    | <b>FIELD TRIPS</b> <ul style="list-style-type: none"> <li>Napier Ports Tour</li> <li>Coastal Strategy – Southern Cells Visit</li> <li>Te Whanganui-ā-Orotū (Ahuriri Estuary)</li> </ul> |                                                                                                                                     |                                                                                                                                                   |
| 5.30 – 7.30pm    | <b>NZCS/PIANC Young Professionals Networking</b><br>The Pavillion, 49 Marine Parade, Napier South                                                                                       |                                                                                                                                     |                                                                                                                                                   |

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# Thursday 20 November

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| 8.00 – 8.55am   | Registration and tea/coffee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                          |                                                                                                                                                            |
| 9.00 – 10.00am  | <b>Keynote</b><br>Natusch Ball Room<br>Kris Faafoi - <b>Navigating change: Insurance, climate risk and coastal communities</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                          |                                                                                                                                                            |
| Session 2       | <b>Lightning talks/Poster session</b><br>Natusch Ball Room<br>Chair – Connon Andrews                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Big data</b><br>Breakout Room 1<br>Chair – Andrew Allison                                                                                                             |                                                                                                                                                            |
| 10.00 – 10.20am | <b>Lightning talks</b> <ul style="list-style-type: none"> <li><b>Preston Malaufiti, University of Otago</b> - “ Variability of bioactive compounds within Undaria pinnatifida in Otago Harbour”</li> <li><b>Jokotola Omidiji, Auckland Council</b> – Balancing Acts: Coastal Erosion, Public Space, and Private Seawalls on Esplanade Reserves</li> <li><b>Paul Wolf, Ocean Wolf</b> – A 6,000m<sup>2</sup> Challenge: Responding to the Ficopomatus Infestation in Ahuriri Estuary</li> </ul> <b>Posters (for viewing - no lightening talks)</b> <ul style="list-style-type: none"> <li><b>Ruby Mckenzie Sheat, Earth Sciences New Zealand</b> – <i>Iwi-led consequence modelling of inundation hazards: a case study at Te Pokohiwi o Kupe   Wairau Bar</i></li> <li><b>Ryan Paulik, Earth Sciences New Zealand</b> – RiskScape: A modelling engine for coastal hazard risk analysis</li> </ul> | <b>Harnessing high resolution topo-bathymetric data for coastal zone management</b><br>Jeff Lillycrop, Woolpert                                                          |                                                                                                                                                            |
| 10.20 – 10.40am |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Enabling coastal data workflows through a unified data model and cloud-native infrastructure</b><br>Jana Echave, OCEANUM                                              |                                                                                                                                                            |
| 10.40 – 11.00am | Morning Tea                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                          |                                                                                                                                                            |
| Session 3       | <b>Coastal Resilience</b><br>Natusch Ball Room<br>Chair – Amy Robinson                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Big data continued</b><br>Breakout Room 1<br>Chair – Shari Gallop                                                                                                     | <b>Ecology</b><br>Breakout Room 2<br>Chair - Sophie Horton                                                                                                 |
| 11.00 – 11.20am | <b>Developing a technical coastal program to build coastal resilience – the Saint Clair Saint Kilda case study</b><br>Raphael Krier-Mariani, Dunedin City Council                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Big data for little agents – identifying agent classes for climate change adaptation simulation using a serious online game</b><br>Andrew Allison, Urban Intelligence | <b>Heatwave impacts in estuaries: implications for ecosystem resilience and carbon cycling</b><br>Emily Douglas, Earth Sciences New Zealand                |
| 11.20 – 11.40am | <b>A multifaceted and interconnected modelling framework to build coastal resilience – Saint Clair Saint Kilda</b><br>Ed Atkin, eCoast                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Seascope Aotearoa: An open-access platform for integrated ocean observations and forecasts</b><br>Remy Zyngfogel, Calypso Science Ltd                                 | <b>Ecological considerations for coastal hazard mitigation: enhancing outcomes for coastal ecosystems</b><br>Anna Madarasz-Smith, Pattle Delamore Partners |
| 11.40 – 12.00pm | <b>Nature based solution feasibility case studies on the Canterbury Coast</b><br>Lana Greig, Jacobs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Harnessing big data to inform fisheries and coastal management</b><br>Jean P. Davis, Fisheries New Zealand                                                            | <b>Looking beneath the surface: The subtidal habitats of Hawke’s Bay</b><br>Andrea Glockner, Hawke’s Bay Regional Council                                  |

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| 12.00 – 12.20pm  | <b>Beyond bathtub modelling: An assessment of built environment exposure to inundation as sea levels rise</b><br><i>Ashlee Blaymires</i> , University of Auckland                                            | <b>Improving key baseline datasets for Aotearoa's coastal resilience</b><br>Stuart Caie, Toitū Te Whenua Land Information New Zealand (LINZ)                                                               | <b>Measuring the impacts of ship anchoring</b><br>Sally J. Watson, Earth Sciences New Zealand                                                    |
| 12.20 – 12.40pm  | <b>The role of infrastructure provision in defining coastal hazard planning rules in District Plans – case study Christchurch</b><br>Alison Bear, Jacobs                                                     | <b>Understanding Coastal Change in Tāmaki Makaurau: Key Insights from Auckland Council's Coastal Monitoring Programme</b><br>Megan Tuck, Auckland Council                                                  | <b>Field methods used to monitor colonisation of subtidal reef enhancement units</b><br>Jack O'Carroll, SLR Consulting Ltd                       |
| 12.40 – 1.00pm   | <b>Asset Management Planning for specialised Assets: Auckland Council's first coastal AMP</b><br>Marli A. Geldenhuys, Auckland Council                                                                       | <b>Practical image processing applications to inform coastal hazard and adaptation planning</b><br>Peter Quilter, Tonkin + Taylor                                                                          | <b>Te Ara Tupua – a case study in sustainable coastal infrastructure</b><br>Tom Shand & Tahana Okeroa, Tonkin + Taylor                           |
| 1.00 - 2.00pm    | <b>Lunch</b>                                                                                                                                                                                                 |                                                                                                                                                                                                            |                                                                                                                                                  |
| <b>Session 4</b> | <b>Resilience and adaptation</b><br>Natusch Ball Room<br>Chair – Alison Bear                                                                                                                                 | <b>Flooding</b><br>Breakout Room 1<br>Chair – Tom Fitzgerald                                                                                                                                               | <b>Physical processes</b><br>Breakout Room 2<br>Chair - Bronwen Gibberd                                                                          |
| 2.00 – 2.20pm    | <b>Moanataiari inundation protection over 5 decades, but what next?</b><br>John Duder, Tonkin + Taylor                                                                                                       | <b>The influence of Sea Level Rise on Freshwater Flooding around Aotearoa New Zealand</b><br>Emily Lane, Earth Sciences New Zealand                                                                        | <b>Monitoring and modelling the supply of beach grade sediment from rivers to the coast</b><br>Richard Measures, Earth Sciences New Zealand      |
| 2.20 – 2.40pm    | <b>Questions arisen from the proposed land use change of the Ahuriri Station, Napier</b><br>José Beyá, IHBEYA   Coastal & Hydro-Environmental Engineering                                                    | <b>Using an equilibrium model to explore the influence of climate variations on estuarine evolution</b><br><i>Edouard Basquin</i> , University of Auckland                                                 | <b>Wellington Airport Southern Seawall Renewal – armour unit selection process and 2D physical model testing</b><br>Amy Sheppard, Beca           |
| 2.40 – 3.00pm    | <b>Ngā Herenga o Papatūānuku: Establishing a tangata whenua climate adaptation network</b><br>Shari Gallop, Pattle Delamore Partners                                                                         | <b>Challenges in applying national-scale coastal flood risk information across Pacific Island contexts</b><br>Shaun Williams, Earth Sciences New Zealand                                                   | <b>Large woody debris on the beaches of Gisborne Tairāwhiti</b><br>Murry Cave, Gisborne District Council                                         |
| 3.00 – 3.20pm    | <b>He raru ki tai - Walking uneasily between two worlds</b><br>Sam Scott-Kelly, David Coastal Consultants                                                                                                    | <b>Dynamics of flood inundation and barrier beach evolution in the Lower Kowai River</b><br>Cindy Asmat, University of Canterbury                                                                          | <b>Extent of contemporary and late Holocene marine terrace cover deposits on Kaikōura Peninsula</b><br>Sophie Horton, University of Canterbury   |
| 3.20 – 3.40pm    | <b>Four years on: Starting and sustaining community-led climate adaptation in the Bay of Plenty</b><br>Ana Serrano, Bay of Plenty Regional Council                                                           | <b>The compound flood during ex-TC Gabrielle could have been forecasted with operational flood model forced by high-resolution numerical weather prediction</b><br>Zhonghou Xu, Earth Sciences New Zealand | <b>Where stormwater meets the sea: integrating coastal outfalls into Auckland council's inlets and outfalls guideline</b><br>Ryan Abrey, Stantec |
| 3.40– 4.00pm     | <b>Afternoon Tea</b>                                                                                                                                                                                         |                                                                                                                                                                                                            |                                                                                                                                                  |
| 6.00pm – late    | <b>Conference Dinner 'Napier Nights – An Art Deco Dream'</b><br>The Napier War Memorial <div> Brought to you by  </div> |                                                                                                                                                                                                            |                                                                                                                                                  |

# Friday 21 November

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| 8.00 – 8.30am    | Registration and tea/coffee                                                                                                                                                                                                                 |                                                                                                                                                                        |
| 8.30 – 9.30am    | <b>Keynote</b><br>Natusch Ball Room<br>Richard Reinen-Hamill - <b>Ka mua, ka muri – Looking Back to Move Forward</b>                                                                                                                        |                                                                                                                                                                        |
| Session 5        | <b>Resilience and adaptation</b><br>Natusch Ball Room<br>Chair – Mike Allis                                                                                                                                                                 | <b>Physical processes</b><br>Breakout Room 2<br>Chair – Ryan Abrey                                                                                                     |
| 9.30 – 9.50am    | <b>The transforming coastline of Tamaki Makaurau in the wake of a triple dip La Nina cycle</b><br>Matthew McNeil, Auckland Council                                                                                                          | <b>The influence of nearshore submerged flats structures on wave refraction and energy distribution patterns</b><br>Raphael, Krier-Mariani, Dunedin City Council       |
| 9.50 – 10.10am   | <b>An adaptation planning decision-making process for infrastructure owners</b><br>Sian A. John, Haskoning New Zealand                                                                                                                      | <b>Cliff erosion by wave abrasion: Insights from wave flume experiments</b><br>Yaxiong Shen, University of Auckland                                                    |
| 10.10 – 10.30am  | <b>Tailoring hazard management responses - Bridging the gap between policy direction and real-world feasibility in coastal management</b><br>Ivana Jurasovic, Davis Coastal Consultants                                                     | TBC                                                                                                                                                                    |
| 10.30 – 10.50 am | Morning Tea                                                                                                                                                                                                                                 |                                                                                                                                                                        |
| Session 6        | <b>Special session – Land based inputs and nearshore coastal ecosystems</b><br>Natusch Ball Room<br>Chair – Karen Bell                                                                                                                      | <b>Coastal hazards/Coastal change/Assets</b><br>Breakout Room 2<br>Chair – Colin Whittaker                                                                             |
| 10.50 – 11.10am  | <b>The value of intact marine ecosystems – can we please manage for that?</b><br>David Schiel, University of Canterbury                                                                                                                     | <b>Hydrodynamic Modelling of Circulation and Sediment Transport in Hawke Bay and the Impacts of Cyclone Gabrielle</b><br>Ted Conroy, eCoast                            |
| 11.10 – 11.30am  | <b>Focusing indigenous knowledge and community on reef resilience</b><br>Rahera Ohia, University of Waikato                                                                                                                                 | <b>Otago coastal hazards monitoring planning</b><br>Julion Wright, Otago Regional Council                                                                              |
| 11.30 – 11.50am  | <b>Evidence of coastal darkening and marine darkwaves: Towards an operational framework leveraging remote sensing to link land practices to coastal ecosystems health in Aotearoa New Zealand</b><br>François Thoral, University of Waikato | <b>Christchurch City Council’s Coastal Hazards Adaptation Planning Programme: planning, education and collaboration</b><br>Tom Simons-Smith, Christchurch City Council |
| 11.50 – 12.10pm  | <b>What happens to coastal productivity when the lights go out and reefs are buried in mud?</b><br>Christopher Battershill, University of Waikato                                                                                           |                                                                                                                                                                        |
| 12.10 – 12.30pm  | <b>Conference Awards and closing</b><br>Natusch Ball Room                                                                                                                                                                                   |                                                                                                                                                                        |
| 12.30 - 1.30pm   | Lunch                                                                                                                                                                                                                                       |                                                                                                                                                                        |