



3RD AUSTRALASIAN

YOUNG COASTAL SCIENTISTS & ENGINEERS CONFERENCE

NEWCASTLE | ONLINE | LOCAL HUBS (AUS & NZ)

Main event at Newcastle City Hall, 90 King St Newcastle NSW 2300

Gold Sponsor



Day 1: Wednesday 27th July

09:30 - 10:00

Newcastle Registration / Local Hub Arrival

10:00 - 12:00

Acknowledgment of Country

Conference Opening

Local & Gold Sponsor Address

Keynote

Economics and Coastal Management - Working Together to Influence Public Policy

Martjin Gough, Aither



City of Newcastle

12:00 - 13:30

Lunch

13:30 - 14:45

Express Course 1

Exploring Petabytes of Coastal Data with Digital Earth Australia - from the Comfort of your Internet Browser!

Robbi Bishop-Taylor, Geoscience Australia



Session Break

15:00 - 16:45

Lightning Presentations 1

Climate Change and Metocean

Benjamin Perry, Flinders University

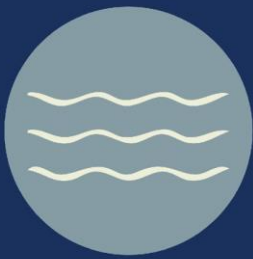
Adelaide's bi-modal wave climate - a forty-year wave hindcast

Wenjun Zhu, University of New South Walkes

An assessment of climate model predictions of climate change induced extreme storms on the East Australia temperate coast

All times are Australian Eastern Standard Time (AEST; GMT +10). WA is 2hrs behind. NZ 2hrs ahead. SA 30mins behind.

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15:00 - 16:45

Lightning Presentation 1 (continued)

Climate Change and Metocean

Alberto Meucci, University of Melbourne

The new Australian CMIP6-derived global wind-wave climate ensemble

Jin Liu, University of Melbourne

Projected wave climate of Bass Strait and South-East Australia by the end of the 21st century

Lachlan Perris, University of Sydney

Quantitative Morphometric Assessment of Coral Fore Reef Spur and

Thomas Fellows, University of Sydney

Decadal evolution of coral reef islands in a changing climate

Michael Thomson, JBPacific

Machine learning techniques for assessing long-term nearshore wave conditions

Charles Cadier, Griffith University

Potential for tidal restoration to reduce methane emissions from impounded wetlands in the Burdekin Catchment

Chloe Broom, Shoalhaven City Council

Bridging the gap between coastal communities, decision makers and technical experts in the face of climate change

John Gilbert, Lake Macquarie City Council

Breaking barriers to act on climate change

17:00
onwards

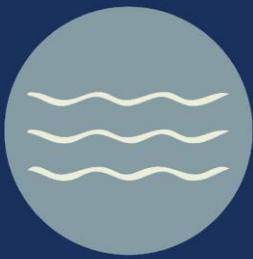
Welcome Drinks - Babylon Newcastle

145 King St, Newcastle

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Day 2: Thursday 28th July

09:00 - 10:00

Meet and Greet Coffee - Relish Cafe

Opposite Newcastle Civic Theatre

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10:00 - 10:30

Newcastle Registration / Local Hub Arrival

10:30 - 12:00

Lightning Presentation 2

Coastal Hazards, Modelling and Observations

Mojgan Razzaghi, University of Waikato

The response of tidal asymmetry to partial freshwater restoration in a small, shallow estuary

Andrew Allison, NIWA

Simulating the impacts of an applied dynamic adaptive pathways plan: how might the future unfold?

Joshua Sargent, University of Waikato

Exploring human-coastal flooding relationships using social-hydrological systems dynamics modelling in Hauraki Plains, NZ

Tomás León Cortés, University of Queensland

Inverse and forward modelling of the 2015 tsunami in Tongoy, northern central Chile

Daniel Wishaw, BMT

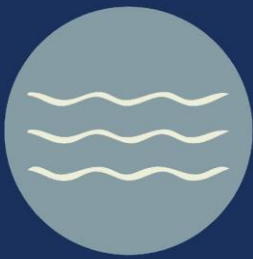
Headland hydrodynamics: an assessment of transport pathways under varying wave conditions

Vincent Kümmerer, University of Algarve

Improved coastal storm identification for the characterization of oceanographic forcing in high-energy wave climates

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Day 2: Thursday 28th July (continued)

10:30 - 12:00

Lightning Presentation 2 (continued) Coastal Hazards, Modelling and Observations

Valeria Fanti, University of Algarve

Evaluation of global digital elevation models in barrier islands

Shaoyu Li, University of New South Wales

Satellite-derived bathymetry using the ICESat-2 and Sentinel-2: cases study in South China Sea and Heron Reef, Australia

Tien Dat Pham, Macquarie University

Mapping mangrove canopy and canopy height using Sentinel-2 MSI and UAV data combined with advanced machine learning techniques in the Pilbara coast, Western Australia

Luke Lyons, BMT

Wave protections influence on planning and design of Small Craft Facilities in Australia

Jak McCarroll, Department of Environment, Land, Water and Planning
Coastal 'Omni-Line': Multi-scale data synthesis, top-down and bottom-up

Lunch

13:30 - 14:45

Express Course 2

Forecasting to Inform Decision Making

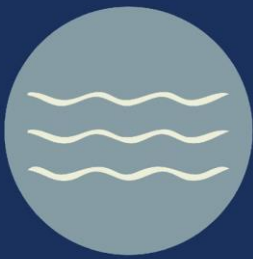
Simone De Kleermaeker, Deltares

bluecoast
CONSULTING ENGINEERS

Session Break

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15:00 - 16:45

Lightning Presentation 3 Coastal Change and Management

RBR

Jacob Jones, University of Newcastle
The politics of biodiversity conservation

James Thompson, Griffith University
Beach rotation, shoreline response and a nearshore wave energy device

Tasman Van Loon, Bluecoast Consulting Engineers
Understanding the dynamics of Harrington Inlet using the Inlet Tracker Tool

Kévin Martins, University of Bordeaux
Innovative non-linear depth-inversion methods for the nearshore region

Sophie Chan, University of Melbourne
Mitigating bank erosion by rock-fillet mangroves

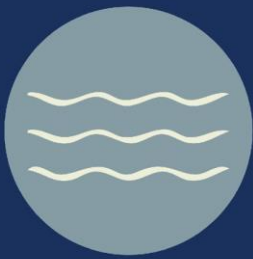
Callum Edwards, West Gippsland Catchment Management Authority
Managing a dynamic urban intermittently open/closed estuary in Inverloch, Australia

Cassie Newman, Auckland University of Technology
Aroturuki te Takutai Moana mai i te Rangi: Using Historic Satellite and 3D UAV imagery to map the dynamics of the coast at sites with anthropogenic debris in Southland, Aotearoa / New Zealand

Elisabeth Strain, UTAS Institute for Marine and Antarctic Studies
Assessing the coastal protection services of natural mangrove forests and artificial rock revetments

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Day 2: Thursday 28th July (continued)

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Lightning Presentation 3 (continued) Coastal Change and Management

Mario Conde-Frias, University of Western Australia

Applicability of sediment transport models in vegetated canopy

Renan Silva, University of Western Australia

Dynamics of the wave-driven circulation in the lee of nearshore reefs

Arnold van Rooijen, University of Western Australia

Quantifying coastal protection benefits of shellfish reefs

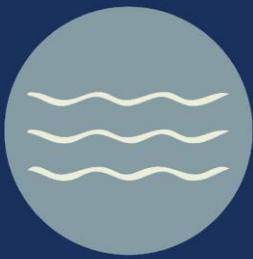
Claudia Franca de Abreu, Western Australia Coastal and Marine
Community Network

*Cultivating coastal and marine stewardship: the WA Coastal and Marine
Community Network*

End Day 2

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Day 3: Friday 29th July

09:30 - 10:00

Newcastle Registration / Local Hub Arrival

10:00 - 11:15

Lightning Presentation 4

Estuary and Estuary Management

Thomas Oliver, University of New South Wales

Contrasting the Holocene evolution and sediment budget of four adjacent beach and barrier systems, Twofold Bay, NSW: implications for coastal management

Gang Yang, University of New South Wales

Wave effects on sediment dynamics in a macro-tidal estuary: Darwin Harbour, Australia during the monsoon season

Ben Cuerel, University of Newcastle

Quantifying the flow-on benefits of saltmarsh restoration to resident fish within Burrill Lake, NSW

Tom Doyle, NSW Department of Planning and Environment

Mapping community uses and values for coastal waterways in SE Australia to drive coastal management and improvement of waterway health

Sachi See-Tonkins, Central Coast Council

Pitfalls and pearls of managing large coastal management grants

Jack Muldoon, Bluecoast Consulting Engineers

Coastal modelling in the development of fluidising jet pump configurations for maintaining a navigable Manning River entrance channel

Christopher Owers, University of Newcastle

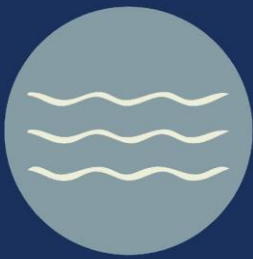
Better blue carbon assessment

Madelaine Broadfoot, University of Newcastle

Entrance & tidal dynamics of an NSW riverine estuary

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Day 3: Friday 29th July (continued)

Session Break

11:30 - 13:15

Panel Q&A Discussion

Career progression and future skills in coastal/ climate science, engineering and management

Alice Harrison, UNSW Water Research Laboratory

Dr Anumitra Mirti, Beca

Dr Danielle Verdon-Kidd, University of Newcastle

Dr Tom Murray, Griffith University

Conference Closing

Lunch

14:00 - 17:00

Conference Field Trip

Newcastle Coastline Walk: Fort Scratchley to Merewether

**Check with your local hub for options and details*

17:30
onwards

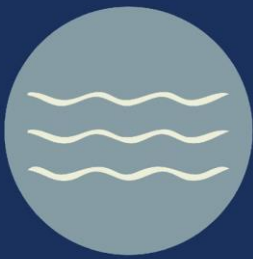
Conference Dinner - Modus Merewether

20 Merewether St, Merewether, Newcastle

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Te Hunga Takutai o Aotearoa
NEW ZEALAND COASTAL SOCIETY

JBP
scientists and engineers

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