



5TH AUSTRALASIAN

YOUNG COASTAL SCIENTISTS & ENGINEERS CONFERENCE

2024

GOLD COAST | ONLINE | LOCAL HUBS (AUS & NZ)**Central Hub:** Greenmount SLSC, Coolangatta

Wednesday 16 October

Welcome to Country

Conference Opening

09:30–11:30
AEST

Platinum Sponsor Opening Address by NSW Department of Climate Change, Energy, Environment and Water

Keynote by Tiahni Adamson

Tell your Story, Walking in Two-Worlds

Break

12:30–13:30
AEST

Express Course 1 – Aaron Salyer

Leveraging Pioneering Techniques to Build Coastal Resilience in California

Session sponsored by Alluvium Consulting

Break

Lightning Presentations 1:

Coastal hazards, climate change impacts and adaptation

Session sponsored by CoastAdapt

Session introduction and silver sponsor address

14:15–15:45
AEST

Dominique Djaidiguna –BMT

Developing Coastal Adaptation Pathways: Utilisation, Case Studies, and Strategic Approaches in Victoria

Emma Reeve – Rhelm

Coastal Zone Emergency Action Subplan (CZEAS) for Collaroy-Narrabeen: Enhancing Coastal Resilience through Strategic Planning

Luke Rocavert – Rhelm

Evolving Risk Profiles: Backwater and Overbank Tidal Inundation in Urban Estuaries

Note: All times are Australian Eastern Standard Time (AEST; GMT +10). Local hub activities vary between different locations. Not all local hubs will host all activities.



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Lightning Presentations 1:

Coastal hazards, climate change impacts and adaptation

Session sponsored by CoastAdapt

Hayden Forrest – Mornington Peninsula Shire
Our Coast Our Future – Coastal Adaptation Planning on the Mornington Peninsula

Ben Hague – Bureau of Meteorology
Eastern Australian estuaries will transition to tidal flood regimes in coming decades

Rui Li – University of Melbourne
Analysis of the 20-Year Variability of Ocean Wave Hazards in the Northwest Pacific

Thalles Araújo – University of Western Australia
Erosion in reef-fronted beaches at seasonal and interannual time scales

Emily Lazarus – James Cook University
Systematic classification of cay morphodynamic sensitivity within the Great Barrier Reef, Australia

Colleen Fish – University of Newcastle
Wave overwash hazards and risk management on coastal rock platforms

Rafael Barros – City of Gold Coast
Surf Break Vulnerability Score Framework – Case of Burleigh Heads

Alysha Johnson – University of Wollongong
The variability of coastal geomorphology around an eroding volcanic island – Norfolk Island

Jordan Vickers – Tweed Shire Council
Planning for change: Sea Level Rise and the Coastal Vulnerability Area

Thomas Wright – Royal HaskoningDHV
Shielding the Shore: A Rapid Response to Emergency Erosion at Wamberal Beach

Session conclusion

14:15–15:45
AEST

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Lightning Presentations 2:

Community engagement, coastal monitoring, management and policy

Session sponsored by University of Newcastle

Session introduction

Stephanie Doumtsis – Alluvium

A recipe for success: Integrating science and community perspectives into coastal management

Jessica Gartrell – Royal HaskoningDHV

Gold Coast Sand: The Next 50 years

Isaac Goessling – University of Sunshine Coast

Optimising Coastal Monitoring: Developing Protocols for Bathymetric Data Collection in High Energy Nearshore Environments

Beau Javernig – City of Gold Coast

*Remote sensing applications in amenity assessments on Gold Coast beaches*09:30–11:15
AEST

Courtney Smith – Water Technology

Is sea level rise policy keeping pace?

Michael Thomson – Alluvium

Coastal monitoring of East Gippsland estuary opening and closure trends using InletTracker

Zoe Zollinger – Royal HaskoningDHV

Developing a Methodology for Visual Offsets in the GBRWHA

Lorena Garcia Woortmann – Sand Talk

Sand Talk – Science for Waterpeople: Creating community and educational opportunities through social media

Ido Fridberg – James Cook University

Reef developmental diversity on the inner shelf of the Great Barrier Reef

Nick Naderi – Department of Environment, Science and Innovation

Automating Water Level Detection with Computer Vision for Coastal Monitoring

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Lightning Presentations 2:

Community engagement, coastal monitoring, management and policy

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09:30–11:15
AEST

Braiya White – Shoalhaven City Council

Coastal Monitoring Approaches in the Shoalhaven for Adaptive Coastal Management

Runjie Yuan – University of Melbourne

The exposure and preservation of dinosaur footprint tracks on intertidal shore platforms

Break

Panel Discussion

Braiding First Nations Knowledge and Coastal Science and Engineering

12:00–13:30
AEST

Mitchell Gibbs (University of Sydney)

Natalie Friday (MinggaMingga Land and Sea Rangers/ Palm Island Aboriginal Shire Council),

Adam Nye (Batemans Bay Local Aboriginal Land Council)

Marika Seden (Alluvium Consulting),

Break

Lightning Presentations 3:

Nature based solutions and restoration + Coastal infrastructure and engineering

Session sponsored by DHI Group

14:15–15:45
AEST

Session introduction and silver sponsor address

Winton Huck – Worley Consulting

Analysis of Beach Erosion and Recovery Methods at Shoalhaven, NSW

Michael Rosenthal – Rhelm

Applying the DST for Bank Erosion Management in the Lower Shoalhaven River Estuary

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Lightning Presentations 3:

Nature based solutions and restoration + Coastal infrastructure and engineering

Session sponsored by DHI Group

Scott Murray - Tonkin + Taylor

Ōpōtiki Harbour Development New Zealand's Newest Harbour

Holly Blakely - Tonkin + Taylor

Nature's Defence: Harnessing Saltmarsh for Innovative Coastal Protection

Ryan Cope - Shoalhaven City Council

Mapping Shoalhaven's Threatened Ecological Communities within the Coastal and Estuarine Environment

Will Souter - Magryn & Associates

Wave Overtopping and the Design of Coastal Defence Structures

Yanyan Zhang - Royal HaskoningDHV

Overcoming Revetment Repair Challenges During Circular Quay Renewal

Kyle Jeffery-Prestwich - JB Pacific & Griffith University

Investigation of rock bags in the coastal environment

Stephanie Harrington - University of Western Australia

Field Observations of Wave Transmission Over a Submerged Artificial Reef

Jianjun Huang - University of Western Australia

Wave transmission across impermeable and porous modular artificial reefs

Michael Peterson - University of Western Australia

Enhancing Coastal Resilience with Brushwood Walls: Modelling Wave Dynamics and Structural Design

Oliver Nickson - Department of Transport, Perth

*Beach Nourishment to Reduce the Breaching Risk of a Sand Spit****Session conclusion***14:15-15:45
AEST

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GOLD COAST | ONLINE | LOCAL HUBS (AUS & NZ)**Central Hub:** Greenmount SLSC, Coolangatta

Friday 18 October

Lightning Presentations 4:

Metocean + Coastal and estuarine hydrodynamics + Blue Carbon

Session sponsored by UNSW Water Research Laboratory

Session introduction and silver sponsor address

Anne Fleur Mineke van Leeuwen – University of Auckland

Linking Turbidity and Nutrient Cycling in the Kaipara Harbour, a Mesotidal Estuary

Paul Lee – JB Pacific

Water level variations in coastal creeks (ICOLLs)

Ye Htet Oo – Water Technology

Estimating natural beach recovery between a storm group

Verity Taylor – Tonkin & Taylor

Enhancing Coastal Infrastructure Safety with Trigger Action Response Plans (TARPS)

Madeline Goddard – Terrestrial Ecosystem Research Network

Monitoring vertical elevation trends in tidal wetlands around Australia

Hayden Nichols – Royal HaskoningDHV

Field Data Collection Methods to Support Estuary Modelling

Ahmed Shama – UNSW

Numerical Investigation of Regular Waves and Ice Floes on Flow Over a Cylinder

Brooke Conroy – University of Wollongong

Carbonate mangrove above-ground biomass is linked to tidal position and forest age

Cristina Viola – NSW Department of Climate Change, Energy, the Environment and Water

*Catchment sediment inputs to estuary wetlands under climate change*09:30–11:15
AEST

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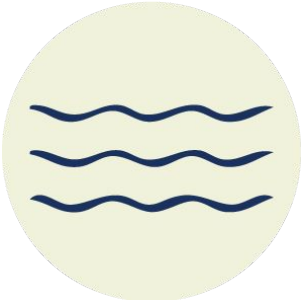
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Friday 18 October cont.

<p>09:30-11:15 AEST</p>	<p>Lightning Presentations 4: <i>Metocean + Coastal and estuarine hydrodynamics + Blue Carbon</i> Session sponsored by UNSW Water Research Laboratory</p> <hr/> <p>Robbi Bishop-Taylor - Geoscience Australia <i>Australia's Next Top Model: An ensemble approach for optimising coastal tide predictions using satellite altimetry and optical remote sensing</i></p> <hr/> <p>Jin Liu - University of Melbourne <i>Increasing wave power due to global climate change and intensification of Antarctic Oscillation</i></p> <hr/> <p>Abdulla Alson Athif - University of Western Australia <i>Estimating spatially variable seafloor characteristics using Approximate Bayesian Computation</i></p> <hr/> <p>Session Conclusion</p>
Break	
<p>11:45-13:30 AEST</p>	<p>Express Course 2 - Dr Jan McDonald <i>Australia's approach to coastal adaptation planning - understanding the legal landscape</i> Session sponsored by Geoscience Australia</p> <hr/> <p>Platinum Sponsor Closing Address by NSW Department of Climate Change, Energy, Environment and Water</p> <hr/> <p>Lightning Presentations People Choice Awards</p> <hr/> <p>Conference Closing</p>
<p>14:00-17:00 AEST</p>	<p>Central Hub Field Trip</p> <hr/> <p>Dr Tom Murray - Griffith University</p>

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