



**PIANC
APAC
2024**

3RD PIANC ASIA PACIFIC
CONFERENCE
27-30 AUGUST 2024
SYDNEY, AUSTRALIA
www.piancapac.com

Connecting Asia Pacific ports in a changing world

Conference Program

(subject to change)

Tuesday 27th August 2024

5.30pm –

Registration Desk Open

7.30pm

Ballroom Foyer, Sofitel Sydney Wentworth Hotel

5.30pm –

Welcome Reception

7.30pm

Trade Exhibition Area, Ballroom Foyer, Sofitel Sydney Wentworth Hotel

Includes drinks and canapés.

Sponsored by

WGA

Wednesday 28th August 2024

7.45am

Conference Registration

Ballroom Foyer, Sofitel Sydney Wentworth Hotel

8.45am – 10.30am

Session 1 – Opening Plenary

Sydney & Melbourne Rooms

8.45am – 8.55am

Welcome and Housekeeping

PIANC APAC 2024 LOC Chair and PIANC AU-NZ Chair

8.55am – 9.05am

Welcome to Country

Aunty Norma Ingram

9.05am – 9.40am

Conference Opening and PIANC President Address

Francisco Esteban Lefler

9.40am – 10.30am

Keynote Address


Marika Calfas, CEO, NSW Ports and Philip Holliday, CEO and Director, Port Authority of NSW




10.30am – 11.00am

Morning Tea

Session 2 11.00am – 12.40pm	2A: Working with Nature, Environment and Ecosystem Services - Environmental Monitoring and Compliance	2B: Ports and Shipping Enabling the Clean Energy Transition	2C: Port Operations and Management - Efficient Cargo Handling and Logistics/Planning for Resilient Port Operations	2D: Port Planning and Engineering - Port and Maritime Hydrodynamics
Location	Perth Room	Sydney Room	Melbourne Room	Brisbane Room
Chair	Claire Treeby	Peter Engelen	Christopher To	Jordan Butler
11.00am – 11.20am	Harbouring sustainability: assessing maritime fender systems' carbon footprint for sustainable ports Thore Kollmorgen <i>ShibataFenderTeam</i>	Port strategy in navigating the hydrogen economy Oktaviani Turbaningsih <i>Australian Maritime College</i>	MEDLOG empty container park development Carsten Varming <i>NSW Ports</i>	Pontoon motion investigation Amer Kazemiaski <i>Stantec</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
11.20am – 11.40am	Creating a data corpus for marine oil spills: a case study Ana X Halabi-Echeverry <i>NextPort vCoE Inc</i>	The feasibility of onshore power supply in Australian ports Kesavan Muruganandan <i>Arup</i>	Operational forecasting of container stacking risk Jacob Suhr <i>DHI Water & Environment</i>	Field measurement and numerical modelling of resuspended sediment due to tugs Jarryd Barnes <i>BMT</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
11.40am – 12.00pm	First-pass whale-strike risk screening for port development Toby Devlin <i>Water Technology</i>	Planning for offshore wind port infrastructure on the U.S. West Coast Jennifer Lim <i>Moffatt & Nichol</i>	Surge movement criteria related to container (un)loading efficiency: data analyses and simulations Luther Terblanche <i>WSP New Zealand</i>	Nature of cross currents at river confluence Gopi Chand Malasani <i>IIT Madras</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
12.00pm – 12.20pm	Innovative low-cost AI digital technology for port noise management Ben Cooper-Woolley <i>SiteHive</i>	Ports and shipping enabling the clean energy transition through common user infrastructure Gabe Tooker <i>Worley Consulting</i>	Enhancing capacity of domestic small container terminal through yard relay out Prabowo Santoso <i>Sepuluh Nopember Institute of Technology Surabaya</i>	Defining coastal hazard design criteria in tropical environments Dougal Greer <i>ORCAS Consulting</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
12:20pm – 12:40pm	Beneficial reuse of dredged material through implementation of a nature-based design approach Samantha Law <i>BMT</i>	Evaluating the risk of Battery Energy Storage Systems at port facilities Mark Tsai <i>GHD</i>	Accelerated low water corrosion: a problem for reinforced concrete? Andrew Czerwinski <i>Infracorr Consulting</i>	A novel solution for measuring infragravity waves using ADCPs Nery Contti Neto <i>Nortek</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
12.40pm – 1.40pm	Lunch			

Session 3 1.40pm – 3.00pm	3A: Dredging and Reclamation - Environmental Impact Assessment and Monitoring	3B: Technological and Digital Advancements - Data Analytics for Port Decision-Making	3C: Port Operations and Management - Effective Asset Management System/Planning for Resilient Port Operations	3D: Port Planning and Engineering - Innovative Engineering Solutions 
Location	Perth Room	Sydney Room	Melbourne Room	Brisbane Room
Chair	Stuart Bettington	Luke Campbell	Greg Britton	Tom Bishton
1.40pm – 2.00pm	Optimisation of sedimentation basins' return water: enhancing dredging environmental and operational outcomes Simon Burgmans <i>in2Dredging</i>	3D Snapback Visualisation Models for improved port safety Jordan Butler <i>WGA</i>	Gold Coast Seaway Breakwater Stability Assessment Paul Prenzler <i>Royal HaskoningDHV</i>	Sustainability, durability and repair for concrete ports and harbours: FIB Model Code 2020 Frank Papworth <i>BCRC</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
2.00pm – 2.20pm	Marine drilling and blasting, and social licenses to operate Greg Miller <i>in2Dredging</i>	Snapback characterization for arresting structure design: physical testing insights Ray Keane <i>Holmes Solutions</i>	Structural Health Monitoring System considering challenges in managing port assets Sam Mazaheri <i>Daly Bay Terminal</i>	U.S. Navy's Ambitious Infrastructure Upgrade: Dry Dock 5 Deborah Macpherson <i>Moffatt & Nichol</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
2.20pm – 2.40pm	Assessing capital and maintenance dredging requirements with Navigate Hydrographic in Gisborne Port Dylan Colson <i>Navigate Hydrographic</i>	Effect mooring line type on mooring safety of ultra large container ships Arnout Fler <i>Royal HaskoningDHV</i>	Upgrade, reinstate, or retreat? A comparison of Breakwater Asset Management Strategies Chris Leaman <i>KBR</i>	Webb Dock East Berth capacity expansion Chris Carboon <i>Jacobs</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
2.40pm – 3:00pm	Carnarvon dredging and Babbage Island spit stabilisation - site works Sam Watkins & Ryan Devlin <i>Maritime Constructions</i>	Risk and resilience in port design option assessments Patrick McCallum <i>Worley Consulting</i>	Electrochemical Chloride Extraction: re-injecting sustainability into the Australian market Troy Palmer <i>Marine & Civil Maintenance</i>	Submerged and emergent revetment concept design of Golden Beach Hadi Hosseinzadeh <i>Stantec</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
3.00pm – 3.30pm	Afternoon Tea			

Session 4 3.30pm – 5.10pm	4A: Decarbonisation and Climate Change Adaptation - Sustainable Maritime Transport	4B: Port Planning and Engineering - Strategic Port Development	4C: Port Operations and Management - Digitisation in Port Operations	4D: Port Planning and Engineering - Sustainable Infrastructure Design and Construction 
Location	Perth Room	Sydney Room	Melbourne Room	Brisbane Room
Chair	David Dack	Jenny Loveday	Sam Isaacs	Simon Ward
3.30pm -3.50pm	Strengthen critical maritime transport in remote Pacific country Yanyan Zhang <i>Royal HaskoningDHV</i>	Enhancing port infrastructure: Gellibrand Spring mooring dolphins upgrade Kaveh Espandar <i>AW Maritime</i>	A digitalised Port Safety Rule Scheduling Framework using a digital port twin Timothy Womersley <i>Seaport OPX</i>	Transshipment Capacity Modelling Linden Clarke <i>BMT Commercial Australia</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
3.50pm – 4.10pm	Coupling sustainability and technology in port equipment Klaus Woeste <i>Konecranes</i>	Concept of operations for Western Australia’s next container port Christopher To <i>WSP</i>	Optimisation in support of GHG emissions reductions Brendan Curtis <i>OMC International</i>	Improved port planning and risk management using AIS and PPU data Giles Lesser <i>OMC International</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
4.10pm – 4.30pm	Enabling Auckland’s transition to a low-emission ferry fleet Will Ingle <i>Beca</i>	Port Master Planning 2.0 Anchen Buys <i>Hatch</i>	Climate stress testing for waterborne infrastructure Gildas Colleter <i>Water Technology</i>	Sustainable marine infrastructure design and construction Luke Campbell <i>WGA</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
4.30pm – 4.50pm	Automation, technological and digital advancements to drive decarbonisation Mathew Kearns <i>Trelleborg</i>	Bulk terminal optimization with simulation - case study Mahim Khanna <i>Portwise</i>	Human Centric design approach in enhancing mooring safety Sasha-Lee Pretorius <i>DHI Water & Environment</i>	Sydney Autostrad Botany Rail Extension (SABRE) Carsten Varming <i>NSW Ports</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
4.50pm – 5.10pm	Thames Coromandel - probabilistic CHA results comparison with real-world coastal erosion Arjen Overduin <i>Royal HaskoningDHV</i>	Economic fender design: changes after PIANC WG211 2024 Nerea Palacios <i>WSP</i>	Wharf Surveys (WSCAM) using photogrammetry digital twin models Diana Soliman <i>Infracorr Consulting</i>	Resilient maritime structures in the Pacific Islands Masoud Hosseini <i>Stantec</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>

5.10pm

Close of Day One

Young Professionals Networking Function (all welcome)

The Republic Hotel, 69-73 Pitt Street, Sydney

Includes drinks and canapés.

6.30pm – 8.30pm

Sponsored by



**Manly
Hydraulics
Laboratory**

Thursday 29th August 2024

Leadership Share Breakfast Event

Hosted by PIANC NSW Chapter

7.15am – 8.30am

Sponsored by



8.15am

Conference Registration

Ballroom Foyer, Sofitel Sydney Wentworth Hotel

8.50am – 10.00am

Session 5– Plenary

Sydney & Melbourne Rooms

8.50am – 9.00am

Housekeeping and Opening Remarks
PIANC APAC 2024 LOC Chair and PIANC AU-NZ Chair

9.00am – 9.05am

Platinum Sponsor Address



9.05am – 9.30am

Keynote Address: Recent Studies on Coastal Disaster Mitigation with Implications for Ports
Professor Tomoya Shibayama, *Research and Development Initiative, Chuo University, Tokyo, Japan*

Sponsored by

9.30am – 9.55am

Keynote Address: Cyclone Gabrielle, our experience
Marty Bayley, *General Manager Infrastructure & Development, Eastland Port, New Zealand*

Sponsored by

9.55am – 10.00am

Platinum Sponsor Address





10.00am – 10.30am

Morning Tea

Session 6 10.30am – 12:30pm	6A: Technological and Digital Advancements - Automation and Robotics in Maritime Operations	6B: Port Planning and Engineering - Innovative Engineering Solutions/Strategic Port Development 	6C: Port Operations and Management - Navigation Safety and Efficient Traffic Management / Innovative Engineering Solutions	6D: Port Planning and Engineering - Sustainable Infrastructure Design and Construction
Location	Perth Room	Sydney Room	Melbourne Room	Brisbane Room
Chair	Sam Mazaheri	Ben Bullock	Catherine Blaine	Renata Berglas
10.30am – 10.50am		Social safeguards, gender action and port planning David Perbey <i>Royal HaskoningDHV</i>	Multi-disciplinary collaboration on design and construction of Offshore Marine Centre 2 Yin Shan Ho , <i>Arup</i>	TCO analysis of SFRC pavement and concrete beams for container terminal Torpung Thanadka <i>Bekaert Nv</i>
	Questions	Questions	Questions	Questions

	6A: continued	6B: continued	6C: continued	6D: continued
10.50am – 11.10am	The future of digital twin site investigations & latent conditions Jason Errey <i>Geoworx</i>	Revolutionizing maritime engineering and navigation through advanced data intelligence and AI applications Mohammadreza Javanmardi <i>OMC International</i>	Vessel impact on bridge structures in Australia Nebojsa Ravic <i>Stantec</i>	Sustainable long-term protection of reinforced concrete port structures Andrew Dickinson <i>Vector Corrosion Technologies</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
11.10am – 11.30am	Digital twin technology for intelligent monitoring and maintenance of port infrastructure Mojtaba Mahmoodian <i>RMIT University</i>	Using WG205 design and construction of breakwaters on soft seabeds Stuart Bettington <i>Royal HaskoningDHV</i>	Lessons learned from physical modelling and Opotiki Harbour development with Hanbar Units Francois Flocard <i>UNSW Sydney Water Research Laboratory</i>	Managing construction works during live port operations – Seaview Wharf Renewal Project Kyle Marshall <i>Brian Perry Civil</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
11.30am – 11.50am	Digital by default: a digital engineering initiative for delivery of marine infrastructure Christian Theis <i>McConnell Dowell</i>	Extending the life of marine infrastructure Andy Harvey <i>Beca</i>	40m unrestricted single-span aluminium gangway design & fabrication Davien Nijskens <i>Superior Jetties</i>	Geotextile design considerations for 'closed' rock bund reclamation structures Anthony Folan <i>SMEC</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
11:50am – 12:10pm	Mandorah Marine Facility – alternative design Richard Mocke <i>AMA Maritime Consulting</i>	The development of Benoa Port as Bali Maritime Tourism Hub (BMTH) Velly Asvaliantina <i>Coordinating Ministry for Maritime Affairs and Investment</i>	Where the nuclear mindset meets maritime engineering Jenny Loveday <i>Kellogg, Brown & Root</i>	Upgrade for the Maritime Police Wharf (MPW) on Betio Island Ali Bardideh <i>Stantec</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
12:10pm – 12:30pm	Security of rail mounted machines in storm events Doug Hawkes <i>Structural Integrity Engineering</i>	WG225 Seismic Design Guidelines for Port Structures update Ravi Segu <i>KBR</i>	About concrete caissons and floating docks Alfonso Capote <i>Acciona</i>	Asset sustainability strategies – Port Bonython jetty remediation David Ewers, WGA & Scott Snedden, <i>Infrastructure Consulting</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
12.30pm – 1.30pm	Lunch			

Session 7 1.30pm – 3.30pm	7A: Working with Nature, Environment and Ecosystem Services - WwN, EwN, BwN, Nature Based Solutions /Climate Change Adaptation	7B: Dredging and Reclamation - Sustainable Dredging Practices	7C: Port Operations and Management - Digitisation in Port Operations/Innovative Engineering Solutions 	7D: Port Planning and Engineering - Sustainable Infrastructure Design and Construction 
Location	Perth Room	Sydney Room	Melbourne Room	Brisbane Room
Chair	Francois Flocard	Richard Morgan	Gareth Robertshaw	Shahab Hosseini
1.30pm – 1.50pm	Environmental drivers in Port Selection MCA and avoidance outcomes in sensitive ecosystems Matt Byrne & Matthew Jones <i>Westport</i>	Morphological Modelling for boating safety improvements at Dungeness Ryan Dermek <i>Water Technology</i>	Cross-border collaborative innovations for business and environmentally sustainable ports Guangrong (Aron) Zou <i>VTT Technical Research Centre of Finland</i>	Enhancing Tsunami-borne debris velocity estimation for improved risk assessment Reza Shafiei <i>Beca</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
1.50pm – 2.10pm	Working with nature for biosecure port infrastructure Katherine Dafforn <i>Macquarie University</i>	Sand as a resource, best practices to conduct responsible dredging projects Boudewijn van de Veire <i>Jan de Nul</i>	Innovations in shiploader technology for wharf environmental management – QAL case study Adam Mayers <i>Aspec Engineering</i>	Understanding the dynamics of a large and complex ebb-tidal delta to support a greenfield port feasibility assessment Tom Shand <i>Tonkin + Taylor</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
2.10pm – 2.30pm		Potential Acid Sulfate Soils Management for 1.5 million m3 of dredged material Damian Dryden <i>Port of Townsville</i>	OmniLift™ Littoral Heavy Lift System Design Robert Taylor <i>Bardex Corporation</i>	Mattress Edges For Berth Scour Protection Samuel Mottershead <i>Proserve</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
2.30pm – 2.50pm	Enhance adaptation to climate hazard: a case study of a deep-sea port in Vietnam Alexandria Norris-Moore <i>Royal HaskoningDHV</i>	Working with Nature – ideation to realisation in sediment management Chi-Yueh Chen <i>GHD</i>	Advanced LiDAR-UAV surveying technology at Patimban Port Development Project Kazuki Ishii <i>Oriental Consultants Global (OCG)</i>	Tropical Cyclone Modelling to determine defensible design conditions Anuja Karunarathna <i>Worley Consulting</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
2.50pm – 3.10pm	High-density coastal armour units for managing increased risk with climate change Ron Cox <i>Water Research Laboratory UNSW</i>	Geraldton Port: new berth selection Adam Bartle <i>BG&E Resource</i>	Design and constructability issues of driven piles in Yarra Delta Region Francesco Bonacci <i>WSP</i>	Reviewing the effectiveness of Climate Change Adaptation outcomes: Mangaia Harbour Upgrade Project Sandeeka Mannakkara <i>University of Auckland</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>

	7A: continued	7B: continued	7C: continued	7D: continued
3.10pm – 3.30pm	Establishing priorities for Australia's coastal research infrastructure Rebecca Zitoun <i>IMOS - Integrated Marine Observing System</i>		Subaqueous capping remediation of Kendall Bay Charmaine Cheah <i>Huesker Australia</i>	Engaging the next generation of PIANC Mark Bennet <i>WGA</i>
	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>	<i>Questions</i>
3.30pm – 4.00pm	Afternoon Tea			
4.00pm – 5.15pm	Session 8 – Plenary <i>Sydney & Melbourne Rooms</i>			

- 4.00pm – 5.00pm Panel Session: Challenges and opportunities for ports in a changing world
Facilitator: **Mike Gallacher**, *CEO, Ports Australia*
Panelists:
Videlina Georgieva, *Managing Director, Svitzer Australia*
Dr Rahman Hidayat, *PIANC Indonesia First Delegate*
Eranda Kotewala, *CEO Solomon Islands Ports Authority, Vice President IAPH Asia, South East & Oceania*
- 5.00pm – 5.15pm Conference wrap-up and close of Day 2
PIANC APAC 2024 LOC Chair and PIANC President, Francisco Esteban Lefler

**7.30pm –
11.30pm**

Conference Dinner & Awards
Ballroom, Sofitel Sydney Wentworth Hotel
Dinner speaker: **Prof Richard de Grijjs**, *National Maritime Museum*

Sponsored by

ARUP

Technical Tours

Technical Tour 1: Sydney Harbour Tour

The tour departs from Sofitel Sydney Wentworth Hotel (Bligh Street entrance) and returns to Campbells Cove Wharf.

Departs: 8.45am

Returns: 12.15pm (approx.)

The tour consists of an approx. 2km walking tour around Circular Quay and a vessel tour of Sydney Harbour. The vessel can be joined directly at 10.00am at Campbells Cove Wharf. If joining the walking tour, please bring a mobile phone and headset / headphones. Light refreshments will be provided on the vessel.

Tour 1 Sponsored by



Technical Tour 2: Port Botany Container Logistics Tour

Buses depart from, and return to, Sofitel Sydney Wentworth Hotel (Bligh Street entrance)

Departs: 8.45am

Returns: 11.45am (approx.)

NSW Ports will host a tour highlighting innovations in container terminal and container supply chain operations. The tour will provide insights into recent developments and future plans at Port Botany showcasing infrastructure investments and automation in container handling, rail yards and empty container park logistics. The tour will include a visit to the new automated rail terminal inside the Patrick AutoStrad Sydney Terminal. The new rail terminal has received several prestigious awards for its innovation and project outcomes. Light refreshments will be provided.

Tour 2 Supported by

