

**18th Australasian Coastal and  
Ocean Engineering Conference 2007  
and the 11th Australasian Port and  
Harbour Conference 2007**

**(COASTS AND PORTS 2007)**

**Melbourne, Australia  
18-20 July 2007**

ISBN: 978-1-62276-428-0

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

Copyright© (2007) by Engineers Australia  
All rights reserved.

Printed by Curran Associates, Inc. (2012)

For permission requests, please contact Engineers Australia  
at the address below.

Engineers Australia  
Engineering House  
11 National Circuit  
Barton ACT 2600

Phone: +61 2 6270 6555  
Fax: (02) 6273 1488

[memberservices@engineersaustralia.org.au](mailto:memberservices@engineersaustralia.org.au)

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2634  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

# TABLE OF CONTENTS

## KEYNOTE

<b>Coasts and Ports</b> .....	1
<i>Eric Van Den Eede</i>	

## PORT PLANNING

<b>Creating Tomorrows Opportunities Today</b> .....	26
<i>Scott Keane, Murray Burling, John Schepis</i>	
<b>Port of Hastings Land Use and Transport Strategy - Long Term Planning Challenges</b> .....	32
<i>Lara Poloni, Ralph Kenyon</i>	
<b>New Berths for Port Kembla Inner Harbour</b> .....	33
<i>Michael Coull, Tonilee Andrews</i>	

## NUMERICAL MODELING (PURE)

<b>An Intermediate-field Model for Ocean Outfalls - A First Step</b> .....	37
<i>Hong Wei Guo, Tony Webb</i>	
<b>Wave Transformation Over Submerged Breakwaters/Reefs</b> .....	43
<i>Mojtaba Tajziehchi, Ronald J. Cox</i>	
<b>The Application of Artificial Neural Network Water Level Forecasts to Galveston Bay, Texas</b> .....	49
<i>A. W. Garcia, J. P. Rhee</i>	

## ENVIRONMENTAL MODELLING & STUDIES

<b>Innovative Environmental Monitoring and Management Strategies: Port of Hay Point Capital Dredging Project</b> .....	54
<i>Simona Trimarchi</i>	
<b>Marine Renewable Energy Research in New Zealand: A Multi-scale Perspective of Resources and Impacts</b> .....	67
<i>Craig Steven, Murray Smith, Richard Gorman, Stephane Popinet, Roy Walters</i>	
<b>Appraisal of a One-dimensional Model, Field Data and Dimensionless Parameters in a Study of Estuarine Circulation</b> .....	73
<i>Errol J. McLean, Jon B. Hinwood</i>	

## CLIMATE CHANGE

<b>Climate Change Impacts on NSW Coasts and Estuaries</b> .....	80
<i>Roshanka Ranasinghe, Dougl Lord, David Hanslow, Kathleen McInnes</i>	
<b>Projected Changes in Climatotological Forcing Conditions for Coastal Erosion in NSW</b> .....	86
<i>Kethleen L. Melnnes, Ian Macadam, Deborah J. Abbs, Siobhan P. O'Farrell, Julian O'Grady, Roshanka Ranasinghe</i>	
<b>Sea Level Rise, Coastal Recession and the Bruun Rule</b> .....	93
<i>Roshanka Ranasinghe, Phil Watson, Doug Lord, David Hanslow, Peter Cowell</i>	
<b>Climate Change Impact on Seabed Sediment Deposition in SW Region, Austrailia</b> .....	99
<i>Fangjun Li, Cedric M. Griffiths, Pierre Weill, Chris P. Dyt, Peter Oka, Ming Feng, Kathlee McInnes</i>	
<b>Impact of Sea Level Rise on Sediment Transport Capacity of Semidiurnal Tidal Regime Estuary</b> .....	105
<i>Hamid Mirfenderesk, Rodger Tomlinson</i>	

## **NAVIGATION**

<b>Assessment of Shiphandling Difficulty for an Approach Channel of a Harbor</b> .....	111
<i>Inyoung Gong, Yeongyu Kim, Younghun Kim, Segil Park, Namsun Kang</i>	
<b>Vessel Interaction - A Case Study</b> .....	117
<i>Peter O'Brien, Terry O'Brien, Chris Hens</i>	
<b>Ship Underkeel Clearance Waves</b> .....	123
<i>Tim Gonrley</i>	
<b>Managing and Assessing Boat Wake Waves</b> .....	129
<i>William C. Glamore, Alexandra M. Badenhop</i>	

## **PHYSICAL MODELLING**

<b>Dalrymple Bay Coal Terminal Causeway Extension</b> .....	135
<i>Arne Nilsen, Gildas Colleter, Brett Miller, Judith Louys</i>	
<b>Two-Dimensional Physical Modelling of Wavescreen Breakwaters</b> .....	142
<i>Ian Coghlan, William Glamore, Ron Cox</i>	
<b>Pressure on Slabs: Physical Modelling of Uplift Pressures and Overtopping on a Wharf, Koniambo New Caledonia</b> .....	148
<i>Alessio, Brett Miller, Gildas Colleter</i>	
<b>Stability and Design of Rubble Toe Protection for Vertical Seawalls</b> .....	153
<i>Matthew Blacka, James Carley, Ronald Cox</i>	
<b>Physical Modelling of Coastal Structures for Gorgon Project, Barrow Island, Western Australia</b> .....	159
<i>James Carley, Mathew Blacka, Alessio Mariani, Stuart Bettington, John Dimock, Geoff Prior</i>	

## **COASTAL PLANNING**

<b>Use of Exceedance Curves for Defining MHWS and Future Sea-level Rise</b> .....	165
<i>Robert G. Bell</i>	
<b>A Lesson in Managing Political Will, Community Pressure and State Government Constraints at a Local Government Level - Toogoom Seawall Project</b> .....	171
<i>S. Lawson, S. Hunt, J. Bunt, M. Waddell</i>	
<b>Queensland Coastal Forum; Local Governments Looking After the Coast</b> .....	177
<i>Shannon Hunt, Greg Stuart, Denis Shaw</i>	
<b>Selection of Appropriate Hazard Levels for Coastal Hazards Mapping of Variable Shortline Types</b> .....	182
<i>Richard A. Reinen-Hamill, Tom D. Shand</i>	

## **COASTAL STRUCTURES**

<b>Shoreline Response to an Offshore Wave Screen, Blairgowrie Safe Boat Harbour, Victoria Australia</b> .....	189
<i>Thomas R. Atkins, Gregory J. Morris, Adam R. Bartle</i>	
<b>Transferring Design Strategies from Model to Prototype Darwin Waterfront and Convention Centre Breakwater</b> .....	195
<i>I. F. W. Jayewardene, K. R. K. Blake, P. Cummings</i>	
<b>Review of Existing Multi-Functional Artificial Reefs</b> .....	202
<i>Leslie Jackson, Bobbie B. Corbett</i>	
<b>Field Measurements of Full Sized Geocontainers</b> .....	208
<i>Matthew Blacka, James Carley, Ronald Cox, Warren Hornsey, Simon Restall</i>	
<b>Nearshore Wave Climate and Localised Erosion During High Wave Events - SE Australia</b> .....	214
<i>Mitchell D. Harley, Ian L. Turner, Bradley D. Morris, Andrew D. Short, Roshanka Ranasinghe</i>	

## **ENVIRONMENTAL MODELLING / PHYSICAL MODELLING**

<b>An Integrated Catchment and Receiving Model for Port Phillip Bay and Western Port to Address Pressing Environmental Concerns</b> .....	220
<i>Shawn Harrison, Randall Lee, Cyprien Bosserelle, Kerry Black</i>	

<b>Long-term Morphological Change at an Engineered Coastal Lagoon Entrance: An Appraisal Using GIS Depth Shading Techniques</b> .....	227
<i>Peter J. Wheeler, Jim Peterson</i>	
<b>Pollutant Build-up and Wash-off from Selected Land Uses within a Port Environment: An Insight into Stormwater Quality Improvement</b> .....	233
<i>B. Kitchen, A. Goonetilleke, S. Sivapalan</i>	
<b>Effluent Dispersion Modelling in Darwin Harbour</b> .....	240
<i>Eric M. Valentine, Philip J. Totterdell</i>	
<b>Physical Modelling of Innovative Solutions to Wave Impacts and Inundation, Rarotonga, Cook Islands</b> .....	246
<i>James Carley, Alessio Mariani, Don Dorrell</i>	

## **KEYNOTE**

<b>Risk-Informed Decision Making for Coasts and Ports</b> .....	252
<i>Todd S. Bridges</i>	

## **PORT STRUCTURES (NEW)**

<b>Case Study - Innovation in the Construction of Northport Berth NO 3</b> .....	300
<i>Tony Pike</i>	
<b>Design and Construction of Tanjung Bin Fly-Ash Jetty in Johor, Malaysia</b> .....	308
<i>Wesley Wong, Rick Turland</i>	
<b>Value Engineering and Project Enhancement - A Case Study of the Goro Port Project</b> .....	315
<i>Bob Lamont-Smith, Graham Hooper</i>	
<b>Goro Nickel Project Detail Design of Port Works</b> .....	329
<i>Ian Putt, Clem Vanderloos</i>	
<b>Woodside Train 5 LNG Project Jetty Spur - A Case Study of Process Piping Integration and Constructability</b> .....	340
<i>Dean Warwick, Richard Cox</i>	
<b>Simplified Method of Analysis of Piled Berthing Structure for Horizontal Point Load</b> .....	348
<i>Harish K. Srivastava, Peter N. Atkinson</i>	

## **COASTAL INSTRUMENTATION & MEASUREMENTS**

<b>Operational Application of X-band Radar Measurements of Directional Surface Waves</b> .....	354
<i>Konstanze Reichert, Bjorn Lund</i>	
<b>Modelling Wind-Generated Waves at Moderate-to-Extreme Conditions</b> .....	360
<i>Alexander V. Babanin, Ian R. Young</i>	
<b>Empirical Modeling of Surface Currents for Maritime Operations</b> .....	367
<i>Yadan Mao, Mal Heron, Peter Ridd</i>	
<b>HF Coastal Ocean Radar in an Observing System</b> .....	373
<i>M. L. Heron, P. V. Ridd, D. J. M. Greenslade, W. J. Skirving, S. F. Heron</i>	
<b>Forecasting Rip Currents at Tairua Beach, New Zealand</b> .....	379
<i>Scott A. Stephens, Giovanni Coco, Richard M. Gorman, Darcel Rickard, K. R. Bryan</i>	
<b>Estimating Weather Downtime for Ocean Engineering using Sequential Downtime Analysis (SDA)</b> .....	386
<i>Brett J. Beamsley, Peter McComb, David Johnson, Jamie Silk</i>	

## **COASTAL PLANNING / NUMERICAL MODELLING**

<b>Viscous Attenuation of Interfacial Waves Over a Porous Elastic Seabed: A Boundary Layer Approximation</b> .....	392
<i>S. J. Williams, D. S. Jeng</i>	
<b>Assessing Estuary Stability</b> .....	399
<i>Alexander F. Nielsen, Angus D. Gordon</i>	
<b>Swell Impacts on Lagoon Hydrodynamics</b> .....	406
<i>Stuart H. Bettington, Jenny L. McKenna</i>	

<b>Assessing the Effectiveness of Approval Processes: Case Study of the Port of Hay Point Capital Dredging Project</b> .....	414
<i>Julie A. Keane</i>	
<b>Implementation of Adelaide's Living Beaches Project</b> .....	423
<i>Robert Tucker</i>	
<b>Eco-Hydraulic Benefits and Threats of a Second Entrance to the Gippsland Lakes</b> .....	430
<i>Allan B. Charteris, David B. Sheehan, Chris R. Barry</i>	

### **COASTAL STRUCTURES / GEOTECH**

<b>Extension of Muuga Port, Tallinn, Estonia</b> .....	436
<i>Torsten Retzlaff</i>	
<b>Design Challenges Associated with the Berth 7 Albany Port Expansion</b> .....	443
<i>Brendon Brodie-Hall, Richard Mocke, Simon Fretton, Robert Semple</i>	
<b>Advanced Geotechnical Modelling and Monitoring for the Port Coogee Project</b> .....	448
<i>Michael Hillman, Eric Y. S. Tam, Richard Mocke, Bruce Keay</i>	
<b>Planning for the Future - Ground Improvement Trials at Port of Brisbane</b> .....	454
<i>Peter Boyle, Jay Ameratunga, Cynthia De Bok, Bill Tranberg</i>	
<b>New Sheet Pile Quay Walls in Aveiro Port</b> .....	460
<i>Daniel Reiter, Daniel Ferron, J. M. Morim de Oliveira, J. L. Rocha, Luis Godinho</i>	

### **COASTAL INSTRUMENTATION & MEASUREMENTS**

<b>Empirical Modelling of Run-up and Overtopping at a Boulder Beach, Raglan, New Zealand</b> .....	464
<i>Tom D. Shand, Richard A. Reinen-Hamill, Roger D. Shand, Wouter Viljoen</i>	
<b>Storm Erosion and Accretion at Collaroy Narrabeen Beach</b> .....	470
<i>Mohammed Habib Ullah</i>	
<b>Observations of Secondary Flow Induced by a Wharf</b> .....	476
<i>Peter Russell, Ross Vennell</i>	
<b>Semaphore Park Offshore Breakwater Trial - Interim Performance Review</b> .....	481
<i>Murray Townsend, James Guy</i>	

### **COASTAL PROCESSES**

<b>Berm Growth and Closure of a Coastal Lagoon Entrance by Swash Overwash</b> .....	487
<i>Tom E. Baldock, Felicia Weir, Michael G. Hughes</i>	
<b>Simulation of Development of Cimanuk River Delta, Indonesia</b> .....	493
<i>Nita Yuanita, Tawatchai Tingasanchali</i>	
<b>Numerical Modelling of Estuarine Saline Dynamics: A Case Study of the Shoalhaven Estuary</b> .....	500
<i>Keryn M. Hawker, Brett M. Miller, Alexandra M. Badenhop</i>	
<b>Rapid Infilling of an Intermittently Open-Closed Lagoon Entrance Following Mechanical Clearence</b> .....	507
<i>Bradley D. Morris, Ian L. Turner</i>	
<b>Considerations of Natural and Anthropogenic Sand Source for Recreation Beach Enhancement</b> .....	513
<i>Richard Reinen-Hamill, Alex Wilson, Edryd Breese, Peter Hemsley</i>	

### **PORT STRUCTURE REPAIRS / PORT STRUCTURES (NEW)**

<b>The Port of Fremantle - Upgrading of Container Berths for Post-Panamax Shipping</b> .....	520
<i>Paul Kong</i>	
<b>Re-engineering and Upgrade of the Tug "W H Parr" at Port Nelson, New Zealand</b> .....	529
<i>R. J. Carter, Drew Bryant</i>	
<b>Queensland Maritime Museum Dry Dock - New Dock Gate Project</b> .....	535
<i>Christopher Best</i>	
<b>Durability Strategy in Relation to Service Life for Structures in Marine Environments</b> .....	541
<i>Atef Cheaitani, Paul Daffy</i>	
<b>Design Implications of Recent Extreme Cyclone Impacts at Cape Lambert</b> .....	548
<i>Stephen Oliver, Richard Mocke</i>	

## **NUMERICAL MODELING (PURE)**

<b>Directional Spectra of Tropical Cyclone Waves</b> .....	554
<i>I. R. Young</i>	
<b>Modeling of Forced Vibration of Marine Structural Systems under Dynamic Loads of Sea Waves</b> .....	560
<i>Alireza Jafari, Arash Kanani, Rozita Jalali Farahani</i>	
<b>Extrapolation of Extreme Wave Height with a Proper Probability Distribution Function</b> .....	566
<i>Zai-Jin You</i>	
<b>Spectral Wave Prediction with Imperfect Forecasts</b> .....	572
<i>Gregory Hibbert, Giles Lesser, Ken Wahren</i>	
<b>Breaking Wave Uplift and Overtopping on a Horizontal Deck using Physical and Numerical Modelling</b> .....	579
<i>Gildas Colleter</i>	

## **COASTAL PROCESSES**

<b>A Field Investigation of Dispersion in a Surfzone Dominated by Longshore Currents</b> .....	586
<i>Alessio Mariani, C. B. Pattiaratchi</i>	
<b>Comparison of Recorded Brisbane and Byron Wave Climates and Implications for Calculation of Longshore Sand Transport in the Region</b> .....	592
<i>Dean Patterson</i>	
<b>Sediment Cells Along the Perth Metropolitan Coast</b> .....	598
<i>Tanya Stul, Ian Eliot, Charitha Pattiaratchi</i>	
<b>Statistical Modelling of Ocean Storminess</b> .....	604
<i>William Dorsch, Tom Newland, David Tassone, Samuel Tymons, David Walker</i>	
<b>Temporal and Spatial Variation of a Large Offshore Sandbar at Raglan, NZ</b> .....	610
<i>Shaw Mead, David Phillips</i>	

## **MARINA PLANNING / DREDGING**

<b>Pumped Recirculation to Enhance Flushing of a Marina and Canal Estate Development</b> .....	616
<i>Andrew McCowan, Ketah Jansons, Sarah Law</i>	
<b>Marina Design to Incorporate Superyachts: A Case Study</b> .....	622
<i>Bobbie B. Corbett, Leslie Jackson</i>	
<b>Investigation and Design of Shell Cove Boatharbour and Marina</b> .....	627
<i>Greg Britton, Cameron Smith, Christian Taylor</i>	
<b>A State of the Art Shore Crossing - Otway Gas Project</b> .....	632
<i>Eric Jas, Dean Campbell, Simon Van Boeschoten</i>	
<b>Annual Mechanical Sand Bypassing at the Mandurah Ocean Entrance and Dawesville Channel</b> .....	638
<i>Laura T. Dubczuk</i>	
<b>Dredging and Cement Treating Harbour Sediments, Fergusson Container Terminal Expansion, Auckland</b> .....	643
<i>Alan R. Hughes</i>	

## **NUMERICAL MODELING (APPLIED)**

<b>Modelling Queensland Tides from the Gold Coast to Cooktown</b> .....	648
<i>David P. Callaghan, Paul K. Boswood, Chris Voisey</i>	
<b>3D Hydraulic Modelling of a Canal Development on the Wairoa River</b> .....	654
<i>Tim S. R. Fisher, Tom D. Shand, Richard Reinen-Hamill</i>	
<b>The Darwin City Waterfront Wave and Water Quality Modeling</b> .....	660
<i>Gildas C. Colleter, Kevan R. K. Blake</i>	
<b>A Design Criterion to Determine the Mode of Shoreline Response to Submerged Breakwaters</b> .....	666
<i>Juan Saviolli, Roshanka Ranasinghe, Magnus Larson</i>	
<b>Defining the Extent and Hazard of Ocean Inundation Wave Overtopping and Flooding along the NSW Coast</b> .....	671
<i>Sean J. Garber, Doug Treloar, David R. Taylor</i>	

<b>3-D Model for Wave-Induced Seabed Response Around Submarine Buried Pipelines.....</b>	<b>678</b>
<i>Behnam Shabani, Dong-Sheng Jeng</i>	

## **TSUNAMI**

<b>Guide to Disaster Reduction on Coasts.....</b>	<b>684</b>
<i>Paul Grundy, Jon Hinwood</i>	
<b>Modelling of Underwater Landslide Induced Tsunami.....</b>	<b>688</b>
<i>Langford P. Sue, Roger I. Nokes, Roy A. Walters</i>	
<b>Using 3DD to Model Tsunami Inundation.....</b>	<b>694</b>
<i>Jose C. Borrero, Cyprien Bosserelle, Gegar Prasetya, Kerry P. Black</i>	
<b>Tsunami Shoaling Behavior: Numerical Analysis.....</b>	<b>700</b>
<i>S. M. Davin, J. Hinwood</i>	
<b>Design for Tsunami Resistance: The Role of Buildings in Reducing Tsunami heights.....</b>	<b>706</b>
<i>Georgina Lee, Jon Hinwood</i>	
<b>Tsunami Shoaling on a Beach of Uniform Slope.....</b>	<b>712</b>
<i>Anil J. D'Cruz, Muhammad Syueib Mohammed Ali, Jon B. Hinwood</i>	

## **DREDGING**

<b>Geraldton Port Dredging Project 2002-3: The Issues, the Events and the Final Outcome.....</b>	<b>719</b>
<i>Ian LeProvost, Peter Collins, Michael Mulligan, Graeme Hubbert</i>	
<b>Maintenance Dredging and Water Quality Monitoring in Hanns Inlet, Western Port, Victoria.....</b>	<b>727</b>
<i>Harry Houridis, Daniel Spooner</i>	
<b>Collaborative Approach to Planning and Monitoring a Dredging Activity.....</b>	<b>734</b>
<i>Fiona Hubczenko, Leonie E. Andersen, Joanna D. Lee</i>	
<b>The Application of Water Injection Dredging Technology in the Widening of the Weipa South Channel.....</b>	<b>742</b>
<i>Nicholas H. Van Amstel, Steven R. Della Mattea</i>	
<b>Dredging in Sensitive Coral Environments, the GBRMPA Experience, Lessons Learned and Initiatives for the Future.....</b>	<b>748</b>
<i>Adam Smith, Tom Foster, James Monkivitch, Phil Koloj, Kevin Edison, Fergus Molloy Matt Johnston</i>	
<b>Sediment Plumes from Dredging.....</b>	<b>757</b>
<i>Peter D. Cummings, Douglas I. P. Shooter, Ben Tuesley</i>	

## **NUMERICAL MODELING (APPLIED)**

<b>Understanding the Waves at Port Phillip Heads, Melbourne Australia.....</b>	<b>762</b>
<i>Giles Lesser, Matthew Turner, David Provis</i>	
<b>Mount Maunganui Reef - Amalgamating Design and the Constraints of Construction.....</b>	<b>768</b>
<i>Shaw Mead, Kerry Black, Andrew Moores</i>	
<b>2D Modelling Approach to Assess Coastal Processes at Stockton Beach.....</b>	<b>775</b>
<i>J. Savioli, D. Hanslow, F. Cosgrove, G. Beattie, J. Simpson, R. Ranasinghe</i>	
<b>Modelling the Recent History of Port Beach.....</b>	<b>782</b>
<i>Clinton Doak, Peter Doust</i>	
<b>Augmentation of Depth-limited Wave Heights within Groups Propagating onto Offshore Slopes of 1V:5H.....</b>	<b>786</b>
<i>William Peirson, Tom D. Shand, Jonathan Hale, Billy Kwan, Ben Lynas, Brendan Short</i>	
<b>Mathematical Model of Interaction between Finite Amplitude Wave and the Liquid Particles.....</b>	<b>791</b>
<i>Anatoli Vakhguelt</i>	

## **TSUNAMI / COASTAL PROCESSES**

<b>Observations and Modelling of the May 4, 2006 Tonga Tsunami in New Zealand.....</b>	<b>797</b>
<i>Jose C. Borrero, Derek Goring, Cyprien Bosserelle</i>	
<b>Application and Testing of the Anuga Tsunami Model for Overtopping and Coastal Sediment Transport.....</b>	<b>803</b>
<i>Tom E. Baldock, Matthew P. Barnes, Natasha Morrison, Tomoko Shimamoto, Duncan Gray, Ole Nielsen</i>	



<b>Wamberal Beach Basement Structures: Provisional Model for Assessment of Additional Coastal Hazards</b> .....	809
<i>Gary Blumberg, Phil Watson</i>	
<b>Ship Surging Induced by Long Waves in Port Salalah, Oman</b> .....	818
<i>Derek G. Goring</i>	
<b>Storm Tide Inundation Levels during Tropical Cyclone Larry</b> .....	824
<i>Paul K. Boswood, Naomi C. Cleaves, John A. Mohaupt</i>	
<b>A Process-based Profile Evolution Model to Simulate Dune Erosion</b> .....	830
<i>David P. Callaghan, Magnus Larson, Roshanka Ranasinghe</i>	

### **ADDITIONAL PAPERS**

<b>Simulation-based Method for Long-Term Prediction of Navigational Risk</b> .....	836
<i>N. M. Quay, J. K. Vrijling, P. H. A. J. M. Van Gelder, R. Groenveld, L. Guema</i>	
<b>Comparison of Recorded Brisbane and Byron Wave Climates and Implications for Calculation of Longshore Sand Transport in the Region</b> .....	841
<i>Dean Patterson</i>	
<b>Ignorance is not Bliss - Lessons Learnt in Developing an Erosion Protection Strategy for Torquay and Urangan Beaches</b> .....	847
<i>Jamie Bunt, Stephanie Lawson, Megan Waddell</i>	
<b>The Role of Vegetation in Reducing Tsunami Heights</b> .....	853
<i>Rhett Fraser, Jon Hinwood</i>	
<b>Author Index</b>	

