

## TABLE OF CONTENTS AND FRONT MATTER

Source: Journal of Coastal Research, 70(sp1)

Published By: Coastal Education and Research Foundation

URL: <https://doi.org/10.2112/1551-5036-70.sp1.i>

---

BioOne Complete ([complete.BioOne.org](https://complete.BioOne.org)) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at [www.bioone.org/terms-of-use](https://www.bioone.org/terms-of-use).

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

---

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

Journal of

# Coastal Research

VOL. SI.70 • CERF • April 2014



Published by

*Proceedings of the 13th International Coastal Symposium*

Andrew Green  
Andrew Cooper  
Editors



ICCS2014



**PROCEEDINGS OF THE INTERNATIONAL COASTAL  
SYMPOSIUM**

**DURBAN, KWAZULU-NATAL, SOUTH AFRICA**

**THE OYSTERBOX UMHLANGA ROCKS**

**13th TO 18<sup>th</sup> APRIL 2014**

Edited by Andrew Green and J. Andrew G. Cooper

Coastal Education and Research Foundation (CERF)

Geological Sciences, School of Agriculture, Earth and Environmental Sciences, University of  
KwaZulu-Natal

Journal of Coastal Research Special Issue 70

## **Organising committee**

Andrew Green (Chair), University of KwaZulu-Natal

Andrew Cooper (Chair), University of Ulster, University of KwaZulu-Natal

Bronwyn Goble, Oceanographic Research Institute, SAAMBR

Charles Finkl, CERF

Chris Makowski, CERF

Carlos Loureiro, Universidade do Algarve, University of KwaZulu-Natal

Lauren Hoyer, University of KwaZulu-Natal

Alan Smith, University of KwaZulu-Natal

## **Scientific committee**

Andrew Green (RSA)

Andrew Cooper (UK)

Bronwyn Goble (RSA)

Alan Smith (RSA)

Gonzalo Malvarez (ES)

Ana Vila-Concejo (AUS)

Oscar Ferreira (PT)

Javier Gracia (ES)

Paolo Ciavola (IT)

Samuel Etienne (Fr)

Helene Burningham (UK)

Rob Duck (UK)

Derek Jackson (UK)

Mike Phillips (UK)

ISSN 0749-0208

Front cover photo: Andrew Cooper

Published By

Marine Geology Research Unit, Geological Sciences

School of Agriculture, Earth and Environmental Sciences,

University of KwaZulu-Natal

Westville,

Durban 4000

South Africa

All the authors are responsible for the contents of their papers. The University of KwaZulu-Natal and CERF cannot be held responsible for any opinions and statements made by them.

## TABLE OF CONTENTS

### **Volume I Runup variability due to time dependence and stochasticity in the beach profiles: two extreme cases of the Spanish coast**

R. Díaz-Sánchez, J.S. López-Gutiérrez, A. Lechuga, V. Negro 1-6

### **Analysis of wave attenuation and shore protection of a bulk carrier ship performing as a detached floating breakwater**

A. Fernández Lázaro, R.M. Gutiérrez Serret, V. Negro, J.S. López-Gutiérrez 7-11

### **The effect of scour protections in offshore wind farms**

C. Matutano, V. Negro, J. López-Gutiérrez, M. D. Esteban, A. Hernández 12-17

### **Using Combined Modelling Approaches to Improve Coastal Defence Design: a case study at Hopton, UK**

J.J. Williams, L.S. Esteves, T. Conduche, P. Barber, A. Tindle 18-22

### **On the use of the Radon transform to estimate longshore currents from video imagery**

S. Larnier, R. Almar, R. Cienfuegos, A. Lejay 23-28

### **Quantifying dispersion in an estuary: A Lagrangian drifter approach**

D. Spencer, C.J. Lemckert, Y. Yu, J. Gustafson, S.Y. Lee, H. Zhang 29-34

### **Monitoring of High Waves and Tsunami using HF Ocean Radar in the East Coast of Korea**

J. Seo, B. Shin, K. Kim 35-40

### **Impact of detached breakwaters on shoreline evolution: a case study on the Portuguese West Coast**

M.A.V.C. Araújo, S.D. Bona, A. Trigo-Teixeira 41-46

### **Growth of cusped spits**

F. Bouchette, M. Manna, P. Montalvo, A. Nutz, M. Schuster, J. Ghienne 47-52

### **Investigating the role of complex sandbar morphology on nearshore hydrodynamics**

N. Cohn, P. Ruggiero, J. Ortiz, D.J. Walstra 53-58

### **Volumetric changes of a soft cliff coast 2008-2012 based on DTM from airborne laser scanning (Wolin Island, southern Baltic Sea)**

J. Dudzińska-Nowak, P. Wężyk 59-64

### **Headland structural impacts on surf zone current circulations**

M.S.A. Razak, A. Dastgheib, F. X. Suryadi, D. Roelvink 65-71

**Relationships between sand spit evolution, environmental forcing and inland inundation**

T.Thomas, S.K. Lynch, M. R. Phillips, A.T. Williams , R.W. Duck 72-79

**Longshore drift cell development on the human-impacted Bight of Benin sand barrier coast, West Africa**

R.A. Laïbi, E.J. Anthony, R. Almar, B. Castelle, N. Senechal, E. Kestenare 78-83

**Wave-driven circulation over a double nearshore bar system during storm conditions**

N. Robin, R. Certain, F. Bouchette, E.J. Anthony, S. Meulé, N. Aleman 84-89

**Geomorphology of coastal formations on present and ancient**

**sandy coasts**

A. Anderson, K. Vilumaa, H. Tõnisson, A. Kont, U. Ratass, S. Suuroja 90-95

**Evolution of Corsican pocket beaches**

B. Yann, B. Rémi, A. Merour, C. Riotte 96-101

**Travelling forelands: complexities in drift and migration patterns**

H. Burningham, J.R. French 102-108

**Control of wave climate and meander dynamics on spit breaching and inlet migration**

E. Chaumillon, F. Ozenne, X. Bertin, N. Long, F. Ganthuy 109-114

**Spur and groove distribution, morphology and relationship to relative wave exposure, Southern Great Barrier Reef, Australia**

S. Duce, A. Concejo, S. Hamylton, E. Bruce, J.M. Webster 115-120

**A paraglacial coastal gravel structure: Connell's Bank, NW Ireland**

J. Knight, H. Burningham 121-126

**Time and spatial variability of sediment gradings in the surfzone of a large scale nourishment**

B.J.A.Huisman, E.E. Sirks, L. van der Valk, D.J.R. Walstra 127-132

**Monitoring changes in suspended sediment concentration on the southwestern coast of Korea**

J. Min, J. Choi, H. Yang, S. Lee, J. Ryu 133-138

**Regional variation in the dynamics of Estonia's coastal landscapes**

U. Ratass, R. Rivas, A. Kont, H. Tõnisson, K. Vilumaa, A. Anderson, R. Szava-Kovats 139-144

**Submarine hard-bottom substrates in the western Baltic Sea – human impact versus natural development**

K. Schwarzer, B. Bohling, C. Heinrich 145-150

<b>Forecasting lagoon outlet erosion: KwaZulu-Natal, southeast Africa</b>	
A.M. Smith, L.A. Guastella, B.J. Goble	151-156
<b>Seasonal sedimentary processes of the macrotidal flat in Gomso Bay, Korea</b>	
J. Kang, H.J. Woo, Y. Lee, Y.B. Son	157-163
<b>Sea level fluctuation and shoreline evolution on decadal time scale. , Lithuanian Baltic Sea coast</b>	
D. Jarmalavičius, D. Pupienis, G. Žilinskas	164-169
<b>The role of beachrocks on the evolution of the Holocene barrier systems in Rio de Janeiro, southeastern Brazil</b>	
A.L.C. da Silva, M.A.M. da Silva, R.S. de Souza, M.L.V. Pinto	170-175
<b>Morphodynamic characterization of beaches on a Pacific atoll island: Tetiaroa, French Polynesia</b>	
M. Jeanson, E.J. Anthony, S. Etienne, F. Dolique	176-181
<b>Middle shoreface sand transport under the influence of a river plume</b>	
S. Meirelles, A. R. Horner-Devine, M. Henriquez, M. Stive, J. Pietrzak, A.J. Souza	182-186
<b>Megaripple dynamics on a dissipative sandy beach</b>	
J. Miles, A. Thorpe, P. Russell, G. Masselink	187-192
<b>Influence of storms on coastal retreat in SW Spain</b>	
M. Puig, L. del Río, T.A. Plomaritis, J. Benavente	193-198
<b>The natural causes of shoreline evolution of Capo Peloro, the northernmost point of Sicily (Italy)</b>	
G. Randazzo, C. Cigala, A. Crupi, S. Lanza	199-204
<b>Meandering fluvial system influencing the evolution of a Holocene regressive barrier in southern Brazil</b>	
A. Biancini da Silva, E.G. Barboza, M. L.C.C. Rosa, S.R. Dillenburg	205-210
<b>Dune coast changes caused by weak storm events in Miedzywodzie, Poland</b>	
N. Bugajny, K. Furmańczyk	211-216
<b>Morphological changes of a Mediterranean beach over one year (San Giovanni Sinis, western Mediterranean)</b>	
S. Simeone, G. De Falco, G. Quattrocchi, A. Cucco	217-222
<b>Multi-scale analysis of wave conditions and coastal changes in the north-eastern Baltic Sea</b>	
Ü. Suursaar, V. Alari, H. Tõnisson	223-228



<b>Field experiments with different fractions of painted sediments to study material transport in three coastal sites in Estonia</b>	
H. Tõnisson, Ü. Suursaar, A. Kont, K. Orviku, R. Ravis, R. Szava-Kovats, K. Vilumaa, T. Aarna, M. Eelsalu, K. Pindsoo, V. Palginõmm, U. Ratas	229-234
<b>Incorporating dynamic factors to the Environmental Sensitivity Index (ESI) shoreline classification – Estonian and Spanish examples</b>	
R. Aps, H. Tõnisson, G. Anfuso, J. A. Perales, K. Orviku, Ü. Suursaar	235-240
<b>The influence of interannual variability of mean sea level in the Adriatic Sea on extreme values</b>	
M.F. Bruno, M.G. Molfetta, A.F. Petrillo	241-246
<b>Overtopping hazard on a rubble mound breakwater</b>	
A.R. Carrasco, M.T. Reis, M.G. Neves, Ó. Ferreira, A. Matias, S. Almeida	247-252
<b>A contribution to climate change assessment of storm surges along the coast of Mozambique</b>	
A.C.F. Aramuge, A. Rocha, P. A. Silva	253-258
<b>Spatial distribution of storm wave energy dissipation for the assessment of beach morphodynamics</b>	
E. Guisado-Pintado, G. Malvárez, F. Navas, R. Carrero	259-265
<b>Hurricane Isaac storm surge deposition in a coastal wetland along Lake Pontchartrain, southern Louisiana</b>	
K. Liu, T.A. McCloskey, T.A. Bianchette, G. Keller, N.S.N. Lam, J.E. Cable, J. Arriola	266-271
<b>A preliminary study of the distribution, sizes and orientations of large reef-top coral boulders deposited by extreme waves at Makemo Atoll, French Polynesia</b>	
A.Y. Lau, S. Etienne, J. P. Terry, A.D. Switzer, Y. Sin Lee	272-277
<b>Responses of coastal waters in the Yellow Sea to Typhoon Bolaven</b>	
C S. Kim, H. Lim, J. Yong Jeong, J. Shim, I. Moon, Y. Jung Oh, H. Yoel You	278-283
<b>Transformation of small-scale meteorological tsunami due to terrain complexity on the western coast of Korea</b>	
T. Ha, J. Choi, J. Yoo, I. Chun, J. Shim	284-289
<b>Applicability of video-derived bathymetry estimates to nearshore current model predictions</b>	
M. Radermacher, M. Wengrove, J. van Thiel de Vries, R. Holman	290-295
<b>Extensive monitoring and intensive analysis of extreme winter-season wave events on the Korean east coast</b>	
S. Oh, W. Jeong	296-301

**Breach process simulation of coastal levees broken by the 2011 Tsunami**

T. Iida, S. Kure, K. Udo, A. Mano, H. Tanaka 302-307

**Storm deposition induced by hurricanes in a rapidly subsiding coastal zone**

J.D. Naquin, K. Liu, T.A. McCloskey, T.A. Bianchette 308-313

**Characterization of wave climate and extreme events into the SW Spanish and Wales coasts as a first step to define their wave energy potential**

N. Rangel-Buitrago, G. Anfuso, M. Phillips, T. Thomas, O. Alvarez, M. Forero 314-319

**Influence of climate change on the Ria de Aveiro littoral: adaptation strategies for flooding events and shoreline retreat**

J.M. Dias, C.L. Lopes, C. Coelho, C. Pereira, F.L. Alves, L.P. Sousa, I.C. Antunes, M. da Luz Fernandes, M.R. Phillips 320-325

**Non-uniformity of storm impacts on three high-energy embayed beaches**

C. Loureiro, Ó. Ferreira, J. A.G. Cooper 326-331

**Effects of bathymetry on the propagation of tsunamis towards the east coast of Korea**

S.B. Yoon, S.C. Kim, U. Baek, J.S. Bae 332-337

**Recording of selected effects and hazards caused by current and expected storm events in the Baltic Sea coastal zone**

K. Furmańczyk, P. Andrzejewski, R. Benedyczak, N. Bugajny, Ł. Cieszyński, J. Dudzińska-Nowak, A. Giza, D. Paprotny, P. Terefenko, T. Zawislak 338-342

**Global changes in mean tidal high water, low water and range**

R.J. Mawdsley, I.D. Haigh, N.C. Wells 343-348

**Cliff-top storm deposits (55-63m amsl) from Morgan Bay, South Africa**

Smith, A.M., Green, A.N., Cooper, J.A.G., Dixon, S., Pretorius, L., Wiles, E., Guastella, L.A. 349-353

**Nearshore bathymetry from video and the application to rip current predictions for the Dutch Coast**

L. Sembiring, A. van Dongeren, G. Winter, M. van Ormondt, C. Briere, D. Roelvink 354-359

**Massive cooling water dispersion behavior in a shallow macro-tidal coastal zone in Korea**

S. Suh 360-365

**RISC-KIT: Resilience-Increasing Strategies for Coasts – toolkit**

A. Van Dongeren, P. Ciavola, C. Viavattene, S. de Kleermaeker, G. Martinez, O. Ferreira, C. Costa, R. McCall 366-371

**Incorporating dynamics factor to the Environmental Sensitivity Index (ESI) shoreline classification – Estonian and Spanish example**

R. Aps, H. Tõnisson, G. Anfuso, J.A. Perales, K. Orviku, Ü. Suursaar 372-377

**Assessment of the Sensitivity of Salamina (Saronic Gulf) and Elafonissos (Lakonic Gulf) islands to Sea-level Rise**

E. Karymbalis, C. Chalkias, M. Ferentinou, G. Chalkias, M. Magklara 378-384

**Preliminary coastal vulnerability assessment for Pico Island (Azores)**

P. Borges, M.R. Phillips, K. Ng, A. Medeiros, H. Calado 385-388

**Coastal impacts of marine renewables: perception of breaker characteristics by beach water users**

C. Stokes, E. Beaumont, P. Russell, D. Greaves 389-394

**Sandy beaches characterization and management of coastal erosion on western Sardinia island (Mediterranean Sea)**

G. De Falco, F. Budillon, A. Conforti, S. De Muro, G. Di Martino, S. Innangi,  
A. Perilli, R. Tonielli, S. Simeone 395-400

**Guidelines for coastal zone management in the Amazon estuary (Amapá, Brazil)**

R.K.S. Gomes, F.B.B. de Sousa, V.V. Amanajás, G.C. Santos, L.C.C. Pereira 401-406

**Managed realignment in practice in the UK: results from two independent surveys**

L.S. Esteves, K. Thomas 407-413

**Artificial intelligence-based models to simulate land-use change around an estuary**

R. Carrero, F. Navas, G. Malvárez, E. Guisado-Pintado 414-419

**Regional differences in recreational preferences of Estonian coastal landscapes**

M. Reimann, Ü. Ehrlich, H. Tõnisson 420-425

**Beach user perceptions at the eastern Yucatan peninsula, Mexico**

A.T. Williams, A. Barugh 426-430

**Are natural beaches facing extinction?**

O.H. Pilkey and J.A.G. Cooper 431-436

**Trend Change(s) in Coastal Management Plans: the integration of short and medium term perspectives in the spatial planning process**

F.L. Alves, L.P. Sousa, T.C. Esteves, E.R. Oliveira, I.C. Antunes, M. da Luz Fernandes,  
L.Carvalho, S. Barroso, M. Pereira 437-442

**Productive Chain of the Mangrove Crab (*Ucides cordatus*) in the Town of Bragança, in the Northern Brazilian State of Pará (Amazon Region)**

M.A.B. Monteiro, F. P. Oliveira, J.N. Araújo, M.E.B. Fernandes 443-447

**An analysis of recent changes in Spanish Coastal Law**

V. Negro, J. López-Gutiérrez, M.D. Esteban, C. Matutano 448-453

**Creation of an alternative season based on sustainable tourism as an opportunity for Baltic Sea Region**

P. Łonyszyn, O. Terefenko 454-460

**Coastal and marine protected areas as key elements for tourism in small islands**

C. Fonseca, C. Pereira da Silva, H. Calado, F. Moniz, C. Bragagnolo, A. Gil,  
M. Phillips, M. Pereira, M. Moreira 461-466

**Framework for proper beach nourishment as an adaptation to beach erosion due to sea level rise**

J. Yoshida, K. Udo, Y. Takeda, A. Mano 467-472

**Assessment of vulnerability and adaptive capacity to coastal hazards in the Caribbean Region**

N.S.N. Lam, H. Arenas, P.L. Brito, K. Liu 473-478

**Methodology for the development of 3D GIS models in the Coastal Zone**

M.G. Magarotto, M.F. Costa, J.A. Tenedório, C.P. Silva, T.L. Martins Pontes 479-484

**A multi-scale analysis to support the implementation of a regional conservation policy in a small-island archipelago – the Azores, Portugal**

H. Calado, C. Bragagnolo, S.F. Silva, M. Pereira 485-489

**Beach nourishment experiment in Palanga, Lithuania**

D. Pupienis, D. Jarmalavičius, G. Žilinskas, J. Fedorovič 490-495

**How can Portugal effectively integrate ICM and MSP?**

M.A. Ferreira, D. Johnson, C. Pereira da Silva 496-501

**West African EBSAs: Building capacity for future protection**

D. Johnson, J. Lee, A. Bamba, C. Karibuhoye 502-506

**An interactive WebGIS observatory platform for enhanced support of integrated coastal management**

A. Oliveira, G. Jesus, J.L. Gomes, J. Rogeiro, A. Azevedo, M. Rodrigues, A.B. Fortunato, J.M. Dias, L.M. Tomas,  
L. Vaz, E.R. Oliveira, F.L. Alves, S. den Boer 507-512

**Coastal management and mis-management: comparing successes and failures at two lagoon outlets in KwaZulu-Natal, South Africa**

L. Guastella, A.M. Smith, T. Breetzke 513-520

**Beach users' profile, perceptions and willingness to pay for beach management in Cadiz (SW Spain)**

B. Alves, J. Benavente, Ó. Ferreira 521-526

**Evaluation of recreational quality, carrying capacity and ecosystem services supplied by sandy beaches of the municipality of Camaçari, northern coast of Bahia, Brazil**

J.R. de Souza Filho, R.C. Santos, I.R. Silva, C.I. Elliff 527-532

**Cross-shore variation of water surface elevation and velocity during bore propagation**

K. Lee, S. Shin, D. Kim 533-538

**Development of an oil spill hazard scenarios database for risk assessment**

S. den Boer, A. Azevedo, L. Vaz, R. Costa, A.B. Fortunato, A. Oliveira,  
L.M. Tomás, J.M. Dias, M. Rodrigues 539-544

**Tourism carrying capacity on estuarine beaches in the Brazilian Amazon region**

R.C. de Sousa, L.C.C. Pereira, R.M. da Costa, J.A. Jiménez 545-550

**The impact of processes associated with risk assessment and categorization of bathing waters on the water safety system development on the Polish Baltic coast**

T. Zalewski, T. Czapiewski 551-555

**Recreational parameters as an assessment tool for beach quality**

C. Botero, C. Pereira, G. Anfuso, O. Cervantes, A.T. Williams, E. Pranzini, C.P. Silva 556-562

**Sedimentation and erosion patterns in a low shoot-density *Zostera noltii* meadow in the fetch-limited Berre lagoon, Mediterranean France**

A. Paquier, S. Meulé, E.J. Anthony, G. Bernard 563-567

**Effects of mud flows from the LUSI mud volcano on the Porong River estuary, Indonesia**

S. Kure, B. Winarta, Y. Takeda, K. Udo, M. Umeda, A. Mano, H. Tanaka 568-573

**Influence of mean sea level rise on tidal dynamics of the Ria de Aveiro lagoon, Portugal**

C.L. Lopes, J.M. Dias 574-579

**The influence of the Maputo and Incomati rivers on the mixing and outflow of freshwater from Maputo Bay (Mozambique)**

K. Markull, J.D. Lencart e Silva, J.H. Simpson, J. M. Dias 580-585

**Salinity modelling accuracy of a coastal lagoon: a comparative river flow analysis of basin model vs. traditional approaches**

L.M. Tomas, M. Rodrigues, A.B. Fortunato, A. Azevedo, P.C. Leitão, A. Oliveira, A. Rocha, J.F. Lopes, J.M. Dias 586-591

**Hydrodynamics of a river-associated tidal inlet and maintenance of dynamic equilibrium: preliminary findings**

M. Villagran, D. Caamaño, R. Cienfuegos 592-597

**Tidal dispersion and flushing times in a multiple inlet lagoon**

J.D. Lencart e Silva, C.L. Lopes, A. Picado, M.C. Sousa, J.M. Dias 598-603

**Study of suspended sediment dynamics in a temperate coastal lagoon: Ria de Aveiro (Portugal)**

S. Plecha, A. Picado, P. Chambel-Leitão, J.M. Dias, N. Vaz 604-609

**Residual currents and transport pathways in the Tagus estuary, Portugal: the role of freshwater discharge and wind**

N. Vaz , J.M. Dias 610-615

**Analysis of the recent evolution of the sand spit at the Solís Chico river mouth**

S. Solari, C. Chreties, G. López, L. Teixeira 616-620

**Differential short- and medium-term behavior of two sections of an urban beach**

J. Benavente, T.A. Plomaritis, L. del Río, M. Puig, C. Valenzuela, B. Minuzzi 621-626

**Estimating the impact threshold for wind-blown sand**

B. Li, J.T. Ellis, D.J. Sherman 627-632

**Rip currents and circulation on a high-energy low-tide-terraced beach (Grand Popo, Benin, West Africa)**

B. Castelle, R. Almar, M. Dorel, J. Lefebvre, N. Sénéchal, E.J. Anthony, R. Laibi,  
R. Chuchla, Y. du Penhoat 633-638

**Video monitoring and field measurements of a rapidly evolving coastal system: the river mouth and sand spit of the Mataquito River in Chile**

R. Cienfuegos, M. Villagran, J.C. Aguilera, P. Catalán, B. Castelle, R. Almar 639-644

**Storm-driven cusp behaviour on a high energy gravel beach**

T.G. Poate, G. Masselink, R.M. McCall, P.E. Russell, M.A. Davidson 645-650

**The Grand Popo beach 2013 experiment, Benin, West Africa: from short timescale processes to their integrated impact over long-term coastal evolution**

R. Almar and other authors. 651-656

**Intertidal beach classification in infrared images**

B. Hoonhout, F. Baart, J. van Thiel de Vries 657-662

**Contribution of swash processes generated by low energy wind waves in the recovery of a beach impacted by extreme events: Nha Trang, Vietnam**

J. Lefebvre, R. Almar, N.T. Viet, D.V. Uu, D.H. Thuan, L.T. Binh, R. Ibaceta, N.V. Duc 663-668

**Observed destruction of a beach cusp system in presence of a double-coupled cusp system: the example of Grand Popo, Benin**

N. Senechal, R.A. Laibi, R. Almar, B. Castelle, M. Biauxque, J.-P. Lefebvre, E. J. Anthony,  
M. Dorel, R. Chuchla, M.H. Hounkonnou, Y. Du Penhoat 669-674

**Nearshore and foreshore influence on overwash of a barrier island**

A. Matias, A.R. Carrasco, C. Loureiro, S. Almeida, Ó. Ferreira 675-680

**Morphodynamic variations of a macrotidal beach (Atalaia) on the Brazilian Amazon Coast**

L.C.C. Pereira, K.S.T. Pinto, A. Vila-Concejo 681-686

**Stratigraphic analysis applied on the recognition of the interface between marine and fluvial depositional systems**

E.G. Barboza, M.L.C.C. Rosa, S.R. Dillenburg, A.B. da Silva, L.J. Tomazelli 687-692

**Alongshore variations in beach-dune system response to major storm events on the Danube Delta coast**

F. Tăţui, A. Vespremeanu-Stroe, L. Preoteasa 693-699

**Bedform Dynamics in a Rip Current**

A. Thorpe, J. Miles, G. Masselink, P. Russell 700-705

**Determining the role of exposure, wave force, and rock chemical resistance in marine notch development**

P. Terefenko, O. Terefenko 706-711

**Beach oscillation and rotation: local and regional response at three beaches in southeast Australia**

A.D. Short, M.A. Bracs, I.L. Turner 712-717

**A preliminary classification of coastal sand dunes of KwaZulu-Natal**

D.W.T. Jackson, J.A.G. Cooper, A.N. Green 718-722

**Integrating different records to assess coastal hazards at multi-century timescales**

A.D. Switzer, F. Yu, C. Gouramanis, J.L.A. Soria, D.T. Pham 723-728

**Wind-driven waves in a shallow estuarine lake with muddy substrates: St Lucia, South Africa**

V. Zikhali, K. Tirok, D. Stretch 729-735

**Beachrock facies variability and sea level implications: a preliminary study**

C.S. Kelly, A.N. Green, J.A.G. Cooper, E.A. Wiles 736-742



## PREFACE

As chairs of the 13th International Coastal Symposium, we would like to warmly welcome our delegates to the sunny east coast of South Africa. It was with great honour that we accepted the invitation, in 2012, from the Board of the Coastal Education and Research Foundation (CERF) to play host to this prestigious event, especially since it is the 30th Anniversary of the Journal of Coastal Research. We are very pleased to use this occasion to introduce to you some of the local research in coastal and marine sciences here in Durban.

This event is hosted by the University of KwaZulu-Natal's (UKZN) School of Agriculture, Earth and Environmental Sciences' Discipline of Geological Science. Geological Sciences at UKZN is a small unit concerned primarily with mineral exploration and the mining sectors. It has, however, maintained a strong focus on sedimentology and geomorphology since the pioneering work of the late Prof. Lester C. King. In the last four years, the emergence of a vibrant and productive Marine Geology Research unit at UKZN has led to a resurgence in the study of the coastal and marine areas of southern Africa. It was within this small unit that this conference was organised.

Out of the initial 820 abstracts submitted, 220 abstracts were accepted for presentation. Based on these abstracts, 136 full length, peer-reviewed papers now appear in Special Issue 70 of the Journal of Coastal Research. The production of this special issue could not have taken place without the assistance of the ICS2014's scientific committee, the anonymous reviewers and the small team of willing postgraduate students who went above and beyond to copy edit and proof every paper therein.

Of course, no event could take place without logistical and financial backing. In this light, we wish to thank the University of KwaZulu-Natal for providing the financial manpower, together with a large donation from the College of Agriculture, Engineering and Science, in order to ensure the ultimate success of ICS2014. We also wish to thank the Oysterbox, our host venue, for providing the sumptuous fare and surroundings within which the conference will take place. We are extremely grateful to Charlie Finkl, CERF President, for sponsorship of the conference dinner. He and Senior Vice President, Chris Makowski, provided constant support for the organisation of this conference since its inception.

Last but not least, we wish to thank you the delegates. Many have made a very long trip to be here in Durban. Without you, there would be little point to the conference. We hope that you will take this opportunity to renew old friendships, forge new ones, and establish new connections. Enjoy your stay.

Welcome, Welkom, Siyaalemukela, Amogela, Amohela, Amogela, Sondzela, Mi amukeriwile, Vho tangedzwa, Amkela, Emukela

Dr. Andrew Green and Prof. Andrew Cooper

Conference co-chairs ICS2014