Coastal Dynamics 2009

Conference Handbook

Coastal Dynamics 2009

Masaru Mizuguchi and Shinji Sato

September 7-11, 2009. Tokyo, Japan.

www.coastaldynamics.org

COASTAL DYNAMICS 2009

Coastal Dynamics 2009

6 Sunday [September]	16:30-19:30	Registration			
	18:00-20:00	Icebreaker Reception			
7 Monday [September]	09:00-09:30	Opening Ceremony			
	09:30-10:30	**Keynote Speech 1**	**Takaaki Uda** **Beach Erosion Arising from Anthropogenic Factors**		
	10:30-11:00	Coffee			
	11:00-12:15	Session 1	■ Wave Modelling (SWAN)	■ Bar Modelling	■ Sediment Dynamics
	12:15-13:30	Lunch			
	13:30-15:10	Session 2	■ Wave Modelling	■ Bar System	■ Coastal Environment
	15:10-15:40	Coffee			
	15:40-17:20	Session 3	■ Wave Theory	■ Beach Sand	■ Morphodynamics Model
8 Tuesday [September]	**09:00-10:00**	**Keynote Speech 2**	**David Huntley** **How do Bedforms Respond to Changing Conditions? A Study Using Abstracted Models**		
	10:00-10:30	Coffee			
	10:30-12:10	Session 4	■ Waves and Structures	■ Beach Model	■ Wave Experiment
	12:10-13:30	Lunch			
	13:30-15:10	Session 5	■ Coastal Structure	■ Estuary Sediment Modelling	■ Remote Sensing
	15:10-15:40	Coffee			
	15:40-17:20	Session 6	■ Storm Surge Simulation	■ Anthropogenic Impact	■ Miscellaneous Coastal Dynamics
9 Wednesday [September]	**09:00-10:00**	**Keynote Speech 3**	**Rob Holman** **Nearshore Remote Sensing**		
	10:00-10:30	Coffee			
	10:30-12:10	Session 7	■ Swash Zone	■ Beach Nourishment	■ Laboratory Experiment
	12:10-13:30	Lunch			
	13:30-15:10	Session 8	■ Estuary	■ Gravel Beach	■ Extreme Events
	15:10-15:40	Coffee			
	15:40-17:20	Session 9	■ Tsunami	■ Dune Erosion	■ Sand Transportation Experiment
10 Thursday [September]	09:00-10:15	Session 10	■ Nearshore Currents	■ Long-term Morphology	■ Global Climate Change
	10:15-10:45	Coffee			
	10:45-12:00	Session 11	■ Wave Modelling	■ Sediment Transport Model 1	■ Field Work
	12:00-13:30	Lunch			
	13:30-15:10	Session 12	■ Structure and Sand Movement	■ Sediment Transport Model 2	■ Measurements by Image Analysis
	15:10-15:40	Coffee			
	15:40-16:55	Session 13	■ Tsunami Disaster Mitigation	■ Inlet	■ Engineering Practices
	19:00-21:00	Banquet			
11 Friday [September]	08:30-18:00	Technical Visit			

Coastal Dynamics 2009

Impacts of human activity on dynamic coastal processes

Tokyo, Japan, September 7-11, 2009

The scope of the Coastal Dynamics series of conferences is the dynamics of the coastal system. This scope covers coastal waves and currents, interactions between wind, water and sediments, and morphology changes in different morphological environments (with and without structures) such as sandy, rocky, and muddy coasts, inlets, and estuaries. The conference documents research and applications treating these coastal dynamics at the short, medium, and large/long spatial and temporal scales of the climatic drivers and coastal responses. Approaches include theoretical formulations, field and laboratory observations, and numerical simulations.

The main theme of the 2009 Coastal Dynamics conference will be the impacts of human activity on dynamic coastal processes. Example topics, which are not exhaustive, within this theme are:

1. Coastal hydrodynamics
2. Coastal sediment transport
3. Coastal morphodynamics
4. Coastal hydro-meteorology (waves, currents, tides, tsunami, storm surge, etc.)
5. Coastal environmental problems and marine ecology
6. Observational techniques and results (field and lab)
7. Numerical simulation (models and results)
8. Miscellaneous coastal dynamics

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COASTAL DYNAMICS 2009

Coastal Dynamics

COASTAL DYNAMICS is a sequence of technical speciality conferences bringing together field and laboratory experimentalists, theoreticians and modelers conducting research on the dynamics of the coastal systems.

www.coastaldynamics.org

Monday 7 [September]

Room A Primrose

9:00-9:30 **Opening Ceremony** Shinji Sato
Speeches by Masaru Mizuguchi, Kazuo Nadaoka

9:30-10:30 **K1: Takaaki Uda** Shinji Sato

K1 **Beach Erosion Arising from Anthropogenic Factors**
Takaaki Uda

11:00-12:15 **A1: Wave Modelling (SWAN)** Piet Hoekstra

1 **Real-Time Wave Prediction Using Hourly Analyzed Atmospheric GPV**
Tracey H. Tom, Hajime Mase, Tomohiro Yasuda

2 **Multiscale Simulations Using Unstructured Mesh SWAN Model for Wave Hindcasting in the Dutch Wadden Sea**
Marcel Zijlema

3 **A Distributed Collinear Triad Approximation in SWAN**
N. Booij, L.H. Holthuijsen, M. P. Bénit

13:30-15:10 **A2: Wave Modelling** Leo H. Holthuijsen

4 **Improved MPS Methods for Wave Impact Calculations**
Abbas Khayyer, Hitoshi Gotoh

5 **3D-CMPS Method for Improvement of Water Surface Tracking in Breaking Waves**
Hitoshi Gotoh, Abbas Khayyer, Hiroyuki Ikari, Chiemi Hori

6 **SPH Method for Simulation of Wave Breaking with Experimental Validation**
Zhigang Bai, Jinjing Zhao

7 **Using a Particle Hybrid Method to Model Coastal Bluff Collapse during Extreme Events**
Johan Vandamme, Qingping Zou, Dominic Reeve, Shan Zou

15:40-17:20 **A3: Wave Theory** Masaru Mizuguchi

8 **Bound Wave Release Induced by Short Wave Breaking – True or False?**
Tom E. Baldock

9 **Mechanisms of Formation and Dynamics of Secondary Waves in Coastal Zone**
Sergey Kuznetsov, Yana Saprykina

10 **Resonant Evolution of Long Period Waves by Periodically Fluctuating Wind Velocity**
Takashi Izumiya, Satoshi Watanabe, Kunihiko Ishibashi

11 **Analytical Description of Transient Long Waves like Storm Surges, Tsunami and Surf Beat**
Peter Nielsen

Room B Mint

11:00-12:15 **B1: Bar Modelling** Tomoya Shibayama

50 **Numerical Model for Bar Migration at Hasaki, Japan**
Yoshiaki Kuriyama

51 **Conceptual Modelling of a Double Crescentic Barred Coast (Leucate Beach, France)**
Pierre Ferrer, Raphael Certain, Jean-Paul Barusseau, Mathieu Gervais

52 **Models and Scales for Nearshore Sandbar Behavior**
Leo Pape, Gerben Ruessink, Yoshiaki Kuriyama

13:30-15:10 **B2: Bar System** Yoshiaki Kuriyama

53 **The Use of Linear Stability Analysis to Characterize the Variability of Multiple Sandbar Systems**
Giovanni Coco, Daniel Calvete

54 **Process-Based Modeling of Cyclic Bar Behavior on Yearly Scales**
Dirk-Jan Walstra, Gerben Ruessink

55 **The Role of Surface Rollers on the Formation of Surfzone Transverse Sand Bars**
Francesca Ribas, H.E. de Swart, Daniel Calvete, Albert Falqués

56 **Modelling Transitions Between Barred Beach States on a Straight Coast**
Darrell Strauss, Rodger Tomlinson

15:40-17:20 **B3: Beach Sand** Jan S. Ribberink

57 **Longshore Sediment Movement along the Enshunada Coast Inferred from Feldspar Thermoluminescence**
Haijiang Liu, Yuuki Ogawa, Tomohiro Takagawa, Shinji Sato

58 **Optically Stimulated Luminescence Dating of a Sandy Tidal Flat in the Danish Wadden Sea – Towards Establishing a Sediment Budget**
Anni T. Madsen

59 **Field Investigation of Strategic Borrow Sites off the Mediterranean Coast of Spain**
Luis Moreno, Ana Garcia Fletcher, G. Díez

60 **Combining Geological and Numerical Models to Assess Sand Resources on the Inner Continental Shelf of Northeast Florida**
Gary A. Zarillo

Room C Iris Garden

11:00-12:15 **C1: Sediment Dynamics** Yasunori Watanabe

94 **Hydro- and Sediment- Dynamics in the German Bight: A Focus on Observations and Numerical Modelling**
Joanna Staneva

95 **Numerical Calculation of the Sediment Transports along the Lagoonal Coast on Majuro Atoll**
Daisaku Sato, Hiromune Yokoki

105 **Sediment Dynamics in the Bay of Marseille**
Michalis I. Vousdoukas, Romaric Verney, Francois Dufois, Christel Pinazo, Didier Sauzade, Samuel Meule, Philippe Cann

13:30-15:10 **C2: Coastal Environment** Jun Sasaki

100 **A Two-Dimensional Horizontal Model for Propagation of Irregular Waves over Fluid Mud Seabed**
Ali Oveisy, Kevin Hall

102 **Dynamic Thermal Response of Urban Heat Release into Coastal Area - Heat Island Reduction in Osaka Region, Japan**
Nobuhito Mori, Yasuaki Sachi, Takaaki Shigematsu

103 **Temporal and Spatial Variations of a Hypoxic Water Mass in Tokyo Bay, Japan**
Hiroshi Yagi, Tanuspong Pokavanich, Susumu Yasui, Kazuo Nadaoka, Yasuyuki Nakagawa, Ryuichi Ariji, Shoichi Matsuzaka, Nobuaki Suzuki, Kazunobu Morohoshi

104 **Pollutant Dispersion around the Perimeter of a Coastal Headland**
Fu Ee Tang

15:40-17:20 **C3: Morphodynamics Model** Takaaki Uda

106 **Novel Methodology for One Line Model Calibration using Impoundment on Mixed Beach**
Inés Martín-Grandes, Jason Hughes, David J. Simmonds, Andrew J. Chadwick, Dominic E. Reeve

107 **A Two-Dimensional Spatial Statistical Model for Morphodynamic Seabed Modelling and Prediction**
Anna Bakare, Serge Guillas, Jeremy Morley, Richard Simons

138 **Morphology and Stratigraphy of a Degrading Delta**
M.M. Hillen, N. Geleynse, J.E.A. Storms, D.J.R. Walstra, M.J.F. Stive

109 **Modeling Sediment Transport and Delta Morphology on the Dammed Elwha River, Washington State, USA**
Guy Gelfenbaum, Andrew Stevens, Edwin Elias, Jonathan Warrick

Tuesday 8 [September]

Room A Primrose

9:00-10:00 **K2: David Huntley** Masaru Mizuguchi

K2 How do Bedforms Respond to Changing Conditions? A Study using Abstracted Models
David Huntley, Giovanni Coco

10:30-12:10 **A4: Waves and Structures** Hitoshi Gotoh

12 Modeling of Waves & Currents around Porous Submerged Breakwaters
Roshan Suminda Ranasinghe, Shinji Sato, Yoshimitsu Tajima

13 A Model of Wave and Current Fields around Coastal Structures
Pham Thanh Nam, Magnus Larson

14 Artificial Neural Network Modelling of Wave-Induced Current over Submerged Breakwaters
Mojtaba Tajziehchi, Amir Sharif-Ahmadian

15 Model-Data Comparisons of Wave Shape Changes over Low-Crested Breakwaters
Zhong Peng, Qingping Zou

13:30-15:10 **A5: Coastal Structure** Nobuhito Mori

16 Failure Mode against Impact and Solitary Waves of Armoured Caisson Breakwaters Protected by a Partially Failed Armour Layer
Miguel Esteban, Hiroshi Takagi, Tomoya Shibayama

17 Interaction Model of Moored Buoy and Breaking Wave Based on Lagrangian Particle Method
Hiroyuki Ikari, Hitoshi Gotoh

18 Investigation of the Influence of a Low-Tide Terrace on Wave Loads Using the Boussinesq-Type Model TRITON
Sofia Caires, Marcel R. A. van Gent

19 Numerical Analysis of Harbor Oscillation in Harbors of Various Shapes
Taro Kakinuma, Taishi Toyofuku, Taisuke Inoue

15:40-17:20 **A6: Storm Surge Simulation** Takashi Izumiya

20 Uncertainty of Numerical Simulations on Storm Surges by Use of Best Track Data of Tropical Cyclone
Hisamichi Nobuoka

21 Storm Surge Hindcast in Tosa Bay of Japan Using a Coupled Model of Surge, Wave and Tide
Soo Youl Kim, Tomohiro Yasuda, Hajime Mase, Yoshiharu Matsumi

22 Effects of Wave Radiation Stress and Vertical Mixing on Storm Surge
Nobuhito Mori, Rie Takada, Tomohiro Yasuda, Hajime Mase, Soo Youl Kim

23 Effects of Ocean Environments upon Storm Surge around Korean Peninsula
Young Hyun Park, Kyung-Duck Suh

Room B Mint

10:30-12:10 **B4: Beach Model** Gerben Ruessink

61 One-Line Model Using the Combination of Polar and Cartesian Coordinates for Crenulate Shaped Bay
Thamnoon Rasmeemasmuang, Sutat Weesakul

62 A Beach Profile Change Model including Three Transport Processes
Shingo Sasaoka, Kenji Noguchi, Yoshio Suwa, Hidetaka Kobayashi, Akira Watanabe, Toshimitsu Takagi

63 Beach Profile Modeling at Different Scales
Pieter Koen Tonnon, Claartje Hoyng, Leo van Rijn

64 A Predictive Model for Beach Profile Evolution
Bradley Johnson, Mark Gravens, Ty Wamsley, Nobuhisa Kobayashi

13:30-15:10 **B5: Estuary Sediment Modelling** Hajime Mase

65 A Model for Predicting Medium to Long Term Morphodynamic Response of Estuaries
Harshinie Karunarathna, Dominic E. Reeve, Mark Spivack

66 Modelling of Sediment Transport at Exe Estuary, Devon, UK
Shunqi Pan, Yongping Chen, Yanliang Du, Sam Reed, Judith Wolf

67 Sediment Movement Under Combined Waves, Tide and River Discharge in a River Mouth
Xiaojing Niu, Satoshi Ueyama, Shinji Sato, Yoshimitsu Tajima, Haijiang Liu

68 Modeling Processes Controlling Sediment Transport at the Mouth of the Columbia River
Edwin Elias, Guy Gelfenbaum

15:40-17:20 **B6: Anthropogenic Impact** Shinji Sato

69 Anthropogenic Reduction of the Natural Supply of Sediments to the Coasts of Washington, Oregon, and California
Orville T. Magoon, Donald D. Treadwell

70 Shoreline Rotation on Pocket Beaches caused by Anthropogenic Factors
Takaaki Uda, Mitsuo Takamura, Kazuo Fujimoto, Fumihito Nakanishi, Shinji Iki, Toshinori Ishikawa

71 Comprehensive Management of Sand Considering Grain Size on Shonan Coast
Toshinori Ishikawa, Takaaki Uda, Toshiro San-nami, Genji Aoshima, Atsushi Yoshioka

72 Coastal Erosion due to Anthropogenic Impacts on Sediment Transport in Douro River - Portugal
Carlos Coelho, Tony Conceição, Bruno Ribeiro

Room C Iris Garden

10:30-12:10 **C4: Wave Experiment** Koji Kawasaki

110 Experimental Study of Transformations of Irregular Waves in Coastal Zone
Yana Saprykina, Sergey Kuznetsov

111 Spray Size Distributions at Flip-Through Wave Overtopping
Yasunori Watanabe, Sin-ichiro Ishizaki

112 Sprays and Finger Jets Evolving from Splashing Jets
Ayumi Saruwatari, Yasunori Watanabe

113 Comparison between Analytical Water Wave Theories and Measurements Made in Mexican Ports
Guillermo Cardoso-Landa

13:30-15:10 **C5: Remote Sensing** Norimi Mizutani

114 Remote Sensing of Swash Zone Boundary Conditions using Video and ARGUS
Hannah E. Power, Meg Palmsten, Rob A. Holman, Tom E. Baldock

115 Observation of Nearshore Processes using Network Camera
Kojiro Suzuki, Shinichi Yanagishima

116 Observation of Morphology and Flow Motion at the River Mouth of Tenryu with X-Band Radar
Satoshi Takewaka, Yu Takahashi, Yoshimitsu Tajima, Shinji Sato

117 Shoreline Identification using Satellite Images
Gabriela García-Rubio, David Huntley, Kenneth Kingston, Luciana Esteves

15:40-17:20 **C6: Miscellaneous Coastal Dynamics** Satoshi Takewaka

31 Modeling of Long-Term Time Series of Wave and Wind - Case Study at Joetsu Coast -
Hajime Mase, Tomohiro Yasuda, Nobuhito Mori

118 Preliminary Application of the HHT to Analyze the Characteristics of Nonlinear Wave Decay over a Fluidized Bed
Yung-Lung Chen, Shiaw-Yih Tzang, Shan-Hwei Ou

119 Measuring Suspended Sediment and Its Wave and Turbulence Forcing in the Dee Estuary
Rodolfo Bolanos, Benjamin D. Moate, Alejandro Souza

121 The Characteristics of Wind-Blown Sand in the Nakatajima Dune
Junaidi, Shin-ichi Aoki, Shigeru Kato, Naoto Wakae

Wednesday 9 [September]

Room A Primrose

9:00-10:00 **K3: Rob Holman** Satoshi Takewaka

K3 **Nearshore Remote Sensing**
Rob Holman

10:30-12:10 **A7: Swash Zone** Masahiko Isobe

24 **Alongshore Variation in Nonlinearities in Swash Hydrodynamics over Beach Cusps**
K. R. Bryan, Giovanni Coco

25 **Bed-Shear Stress in Bore-Generated Swash on Steep Beaches**
Gustaaf Kikkert, Dubravka Pokrajac, Tom O'Donoghue

26 **Waves In and Just Outside the Swash Zone during a Storm**
Masaru Mizuguchi

27 **Field Measurements of Net Sediment Flux from Individual Swashes on a Sandy Beach**
Chris E. Blenkinsopp, Ian L. Turner, Gerd Masselink, Paul E. Russel

13:30-15:10 **A8: Estuary** Jørgen Fredsøe

28 **Dynamic Changes of Waves and Currents over the Collapsing Sandbar of the Tenryu River Mouth Observed during Typhoon T0704**
Yoshimitsu Tajima, Haijiang Liu, Shinji Sato

29 **Process-Based Modeling for the Yangtze Estuary**
A. Chu, Z.B. Wang, H.J. de Vriend

30 **Seasonal Variation of Residual Currents in the Meghna Estuary of Bangladesh**
Mohammad Asad Hussain, Mohammed Abed Hossain, Anisul Haque

139 **Long-Term Observations of Flow and Suspended Sediment in a Tidally-Dominated Estuary**
Mahdi Razaz, Kiyoshi Kawanishi

15:40-17:20 **A9: Tsunami** Tom E. Baldock

32 **Experimental Study of Sediment Transport Caused by Tsunami**
Takumi Yoshii, Masaaki Ikeno, Masafumi Matsuyama

33 **Real-Time Tsunami Prediction Employing Offshore Observed Data**
Tomohiro Yasuda, Tomotsuka Takayama, Hajime Mase

34 **Modeling Time-Varying Tsunami Sediment Deposition**
Alex Apotsos, Bruce Jaffe, Guy Gelfenbaum, Edwin Elias

35 **A Study for the Sediment Transport by the 2004 Indian Ocean Tsunami along the Natural Coast of Hambantota, Sri-Lanka**
Takeshi Nishihata, Kazuhisa Goto, Yoshimitsu Tajima, Tomoyuki Takahashi, Fumihiko Imamura

Room B Mint

10:30-12:10 **B7: Beach Nourishment** Hans Hanson

73 **Profile Equilibration and Longshore Spreading associated with Beach Nourishment: A Case Study along West-Central Florida Coast**
Ping Wang, Nicole A. Elko, Tiffany M. Roberts

74 **Physical Performance of Beach Nourishment Projects along a Microtidal Low-Energy Coast, West-Central Florida, USA**
Tiffany M. Roberts, Ping Wang, Nicole A. Elko

75 **Theory and Field Test of Beach Nourishment Using Coarse Sand and Gravel**
Takayuki Kumada, Takaaki Uda, Toshinori Ishikawa

76 **Experimental Flume Simulation of Shoreface Nourishments under Storm Conditions**
Florent Grasso, Hervé Michallet, Eric Barthélemy

13:30-14:45 **B8: Gravel Beach** Nobuhisa Kobayashi

77 **On the Role of Impulsive Pressures induced by Plunging Breakers acting on Gravel Beaches**
Adrián Pedrozo-Acuña, Alec Torres-Freyermuth, Qingping Zou, Tian-Jian Hsu, Dominic E. Reeve

78 **Storm Response and Beach Rotation on a Gravel Beach**
Amaia Ruiz de Alegria-Arzaburu, Gerhard Masselink, Jon Williams

80 **Effects of Groundwater Table on Wave Breaking in a Gravel Beach**
Kwang-Ho Lee, Norimi Mizutani, Toshiaki Fujii

15:40-17:20 **B9: Dune Erosion** Magnus Larson

81 **Dune Erosion and Overwash**
Nobuhisa Kobayashi, Ali Farhadzadeh

82 **MICORE: Dune Erosion and Overwash Model Validation with Data from Nine European Field Sites**
Ap van Dongeren, Annelies Bolle, Michalis I. Vousdoukas, Theocharis Plomaritis, Petya Eftimova, Jon Williams, Clara Armaroli, Deborah Idier, Pieter van Geer, Jaap van Thiel de Vries, Piet Haerens, Rui Taborda, Javier Benavente, Ekaterina Trifonova, Paolo Ciavola, Yann Balouin, Dano Roelvink

83 **Washover Development on Mixed-Energy, Mesotidal Barrier Island Systems**
Piet Hoekstra, Miriam ten Haaf, Pieter Buijs, Albert Oost, Ralf Klein Breteler, Kevin van der Giessen, Maarten van der Vegt

84 **Measurements on the Interaction between Dunes and Dikes during Extreme Storm Events**
Pieter van Geer, Marien Boers, Marcel van Gent

Room C Iris Garden

10:30-12:10 **C7: Laboratory Experiment** Hiroshi Yagi

120 **Oscillatory Turbulent Flow inside and around Porous Media**
Sota Nakajo, Takaaki Shigematsu, Naoya Sakashita, Gozo Tsujimoto, Kosei Takehara

122 **A Large-Scale Laboratory Experiment of Rip Current Circulations over a Moveable Bed: Drifter Measurements**
Bruno Castelle, Hervé Michallet, Vincent Marieu, Fabien Leckler, Benjamin Dubardier, Adrien Lambert, Céline Berni, Eric Barthélemy, Frédéric Bouchette, Philippe Bonneton, Olivier Kimmoun, Damien Sous, Rafael Almar

123 **Sand Transport under Full-Scale Surface Waves**
Jolanthe J.L.M. Schretlen, Jan S. Ribberink, Tom O'Donoghue

125 **Suspended Sediment Fluxes in the Inner Surf and Swash Zones - Large Scale Data under Erosive Wave Conditions**
José M Alsina, Agustín Sánchez-Arcilla, Iván Cáceres

13:30-15:10 **C8: Extreme Events** Tsutomu Sakakiyama

126 **Degree of Experience for Extreme Wave Statistics**
Toshikazu Kitano, Wataru Kioka, Rinya Takahashi

127 **Wave-Induced Morphodynamic Risks - Characterization of Extremes**
Agustín Sánchez-Arcilla, José A. Jiménez, Carlos Peña

128 **Foreshore Erosion of Kashima Coast by 2006 Autumn Storms and Its Alongshore Dynamics**
Elsayed M. Galal, Satoshi Takewaka

129 **Field Survey of Storm Surge Disaster due to Cyclone SIDR in Bangladesh**
Tomoya Shibayama, Yoshimitu Tajima, Taro Kakinuma, Hisamichi Nobuoka, Tomohiro Yasuda, Raquib Ahsan, Mizanur Rahman, M. Shariful Islam

15:40-17:20 **C9: Sand Transport Experiments** Ping Wang

130 **A French Project to Understand and Predict the Short-Term Dynamics of Sandy Coast: ECORS**
Thierry Garlan, Fabrice Ardhuin

131 **Acoustical Observations of Velocity and Suspended Sediment Structures due to Oscillatory Flow over a Rippled Bed**
Peter D. Thorne, David Hurther

132 **Bedload Sediment Transport Budget Using CT-Scanning**
Stephane Montreuil, Bernard Long

133 **Sheet Flow Sand Transport Processes in Oscillatory Flow with Acceleration Skewness**
Dominic A. van der A, Tom O'Donoghue, Jan S. Ribberink

Thursday 10 [September]

Room A Primrose

9:00-10:15 A10: Nearshore Currents — Akio Okayasu

36 **A Mechanism Inhibiting Rip Channel Formation for Oblique Waves**
Roland Garnier, Nick Dodd, Albert Falqués, Daniel Calvete

37 **3D Computations of Wave-Driven Longshore Currents in the Surf Zone**
Roald B. Treffers, Jebbe J. van der Werf, Maarten van Ormondt, Dirk-Jan Walstra

38 **Littoral Drift Behavior around a Small Island Port**
Takayuki Sasaki, Kentaro Hayashi, Akihiro Yamamoto, Hiroyuki Bessyo, Akira Kawamori, Hideo Kondo

10:45-12:00 A11: Wave Modelling — Yoshimi Goda

43 **Numerical Modeling of Hydrodynamics on a Salt Marsh**
Tomohiro Suzuki, Taro Arikawa, Marcel J.F. Stive

44 **Numerical Examination on Countermeasure against Wave Overtopping Disaster around Road Revetment using Two-Dimensional Numerical Wave Flume based on VOF Method**
Koji Kawasaki, Masami Kiku

46 **Wave Amplification and Air-Gap Response under a Multi-Column Platform**
Jing Li, Soon Keat Tan, Zhenhua Huang, Adi Kurniawan

13:30-15:10 A12: Structure and Sand Movement — David Huntley

39 **Prediction of Development of Sand Body and Movement of Fine Sand Offshore of Detached Breakwaters**
Masaya Fukuhama, Takaaki Uda, Koji Yamada, Masumi Serizawa, Toshiro San-nami, Toshinori Ishikawa

40 **Modeling of Flow through a Vertical Perforated Pipe in the Beach, and the Morphodynamic Interpretation: The Pressure Equalization Module System**
Jørgen Fredsøe, Peter Engesgaard, Per Sørensen

41 **Examination of Efficacy of Submerged Groin System against Beach Erosion through Numerical Simulation**
Yoshimi Goda, Nobuyuki Ono, Yoshiyuki Uno

42 **Physical Environment Change of Long Sandy Beach by Headland System for Erosion Control**
Akio Okayasu, Takashi Nemoto

15:40-16:55 A13: Tsunami Disaster Mitigation — Guy Gelfenbaum

47 **Research and Development of Flap Gate-Type Wave Breaker for Protection against Tsunami and Storm Surge**
Hideyuki Niizato, Yuichiro Kimura, Kyouichi Nakayasu, Takashi Fujita, Osamu Kiyomiya

48 **Tsunami Flow Velocity behind the Coastal Forest with an Open Gap– Effects of Tsunami and Tree Condition**
Nguyen Ba Thuy, Norio Tanaka, Katsutoshi Tanimoto, Kenji Harada, Kosuke Iimura

49 **Direct Bed Stress Measurements under Solitary Tsunami-Type Waves and Breaking Tsunami Wave Fronts**
Jaya Kumar Seelam, Tom E. Baldock

Room B Mint

9:00-10:15 B10: Long-term Morphology — Yoshimitsu Tajima

85 **Historical Morphological Development of the Eastern Scheldt Tidal Basin (The Netherlands)**
M. Eelkema, Z.B. Wang, M.J.F. Stive

86 **Forecasting and Uncertainty Estimation of Nearshore Bathymetric Evolution over Annual Timescales**
Jose M. Horrillo-Caraballo, Vanesa Magar, Dominic E. Reeve

87 **Interactions between Sandbanks – The Great Yarmouth Banks, UK**
Karen Thurston, Chris Vincent, Tony Dolphin

10:45-12:00 B11: Sediment Transport Model I — Tom O'Donoghue

91 **The Role of the Depth-averaged Concentration in Coastal Morphodynamics**
Daniel Calvete, Albert Falqués, Huib E. de Swart, Nicholas Dodd, Francesca Ribas, Roland Garnier

92 **A Sedimentation Process of a Group of Blocks by DNS**
Eiji Harada, Hitoshi Gotoh, Naoki Tsuruta

93 **Numerical Simulation of Rapid Erosion of Seisho Coast Triggered by Storm Waves during Typhoon 0709**
Masumi Serizawa, Takaaki Uda, Kenji Suzuki, Shogo Maruyama, Hiroyuki Takano, Toshiro San-nami, Toshinori Ishikawa

13:30-14:45 B12: Sediment Transport Model II — Marcel Stive

88 **Sediment Transport Module for a B-Grid Coastal Shelf Ocean Model**
Laurent O. Amoudry, Alejandro J. Souza, Jason T. Holt

89 **Modeling the Effect of Wave Shape on Sediment Transport**
Tom J.J. van den Berg, B.G. Ruessink, Leo C. van Rijn

90 **Numerical Simulation for Vertical Sorting of Graded Particles in Sheetflow by Two-Phase Turbulent Flow Model**
Eiji Harada, Hitoshi Gotoh

15:40-16:55 B13: Inlet — Peter Nielsen

96 **Empirical Relationships between Inlet Cross-Section and Tidal Prism: A Review**
Marcel J.F. Stive, J. van de Kreeke, Nghiem T. Lam, Tran T. Tung, Roshanka Ranasinghe

97 **Seasonal Closure of Chilaw Inlet, Sri Lanka: Physical Processes and Mathematical Modeling**
Magnus Larson, Nalin Wikramanayake, Hans Hanson, Roshanka Ranasinghe

98 **Influences of Channel Dredging on Flow and Sedimentation Patterns at Microtidal Inlets, West-Central Florida, USA**
Tanya M. Beck, Ping Wang

Room C Iris Garden

9:00-10:15 C10: Global Climate Change — Giovanni Coco

134 **A Process Based Approach to Derive Probabilistic Estimates of Coastal Recession due to Sea Level Rise**
Roshanka Ranasinghe, David Callaghan, Marcel, J. F. Stive

135 **Impact of Global Climate Change on Wave Climate**
Nobuhito Mori, Ryota Iwashima, Tomohiro Yasuda, Hajime Mase, Tracey Tom, Yuichiro Oku

136 **Influences of Global Climate on Peak Wave Height in the Typhoon Season**
Hajime Tanji, Hirohide Kiri

10:45-12:00 C11: Field Work — Agustín Sánchez-Arcilla

137 **Formation and Long-Term Evolution of Beach Cusps with Tracking Particle Movement**
Anurak Sriariyawat, Nicholas Dodd

108 **Spatially-Varying Morphodynamics over a Shore-Parallel Transgressive Shoal, South-Central Louisiana, U.S.A.**
Daijiro Kobashi, Gregory W. Stone

140 **Migration of Multiple Sandbars on Chirihama Beach, Japan**
Kazuhiro Hayakawa, Masatoshi Yuhi, Hajime Ishida

13:30-15:10 C12: Measurements by Image Analysis — Rob Holman

141 **Flow and Turbulence around an Offshore Wind Turbine Pile in Tidal Currents using Particle Image Velocimetry**
David McGovern, Suzana Ilic, Andrew Folkard, Stuart McClelland, Brendan Murphy

142 **Application of Digital Image Process on Observing the Motions of Wave and a series of Poro-Elastic Submerged Breakwaters**
Jian-Wu Lai, Yuan-Jyh Lan, Tai-Wen Hsu, Chia-Huan Ting, Chen-Chen Chang

143 **PIV Measurements of a Turbulent Round Jet in Wave Environment**
Shih-Chun Hsiao, Tai-Wen Hsu, Jian-Feng Lin, Kuang-An Chang

144 **DCIV Derived Flow Fields for Waves Breaking over a Bar**
K. Govender, H. Michallet, M.J.Alport, G.P. Mocke, M. Mory

15:40-16:55 C13: Engineering Practices — Hisamichi Nobuoka

145 **Improving Bypass and Increasing Navigation Depth: A Vision for Hvide Sande Harbour, Denmark**
Nicholas Grunnet, Ida Brøker, Erik Clausen, Per Sørensen

146 **Hydrodynamic Response of a Transgressive Shoal to the Proposed Mining for Restoring Adjacent Beaches and Barriers: Sabine Bank, Off Louisiana-Texas Coast, United States**
Felix Jose, Gregory W. Stone, Daijiro Kobashi, Seyed M. SiadatMousavi, Baozhu Liu

147 **Modeling Morphologic Responses to Proposed Engineering Modifications at Sebastian Inlet, FL**
Florian G. Brehin, Gary A. Zarillo

Technical Visit

Friday, 8:30 – 18:00, 11 September, 2009.

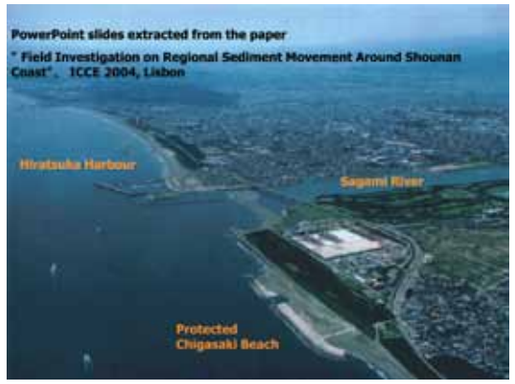
The visit shows coastal protection works against beach erosion, storm surge and tsunami, and experimental facilities at Port and Airport Research Institute.

The visit is a bus tour. It departs at 8:30 from the main lobby on the first floor of Toranomon Pastoral Hotel (conference venue) and returns to the hotel. The arrival time at the hotel may be delayed depending on traffic conditions. Sandwich and soft drink will be served for lunch on the bus.

▶ **Important Notice**
Please confirm your participation to the visit at the reception desk on registration.

In Japan, sandy beaches of about 160 ha are lost in a year. The *Chigasaki Coast* in *Kanagawa Prefecture* is one of the beaches suffering from erosion, and is protected by blocks, stones and sands transported from dams. Participants are invited to see Japanese conventional (placing blocks and stones) and newly-started (supplying sands from dams) countermeasures against beach erosion at the *Chigasaki Coast* as well as those against storm surge and tsunami at the nearby *Fujisawa Coast*, which is the biggest bathing beach and has three million visitors in summer season.

In the afternoon, participants will visit Port and Airport Research Institute and experience several unique experiments.



Beach Erosion at Sagami river mouth

Port and Airport Research Institute
www.pari.go.jp

- Large Hydro-Geo Flume
- Intelligent Wave Basin for Maritime Environments
- Coastal Bottom Boundary Eco-Hydro Dynamics Experiment Flume
- Intertidal Flat Experimental Facility
- Laboratory for Coastal Ecotoxicology

Large Hydro-Geo Flume

Venue

The conference will be held on the 4th floor of the New Tower of Toranomon Pastoral Hotel Tokyo.

Web: www.pastoral.or.jp/corpo/index7.php

The hotel is located at the center of Tokyo and very convenient to look around Tokyo metropolitan area. The nearest subway station is *Kamiyacho* (H05, Hibiya Line) located two minutes walk from the hotel. From *Tokyo Station* (M17), you may use *Marunouchi Line* bound for *Shinjuku* and change to *Hibiya Line* at *Kasumigaseki* (M15 & H06). The *Kamiyacho* (H05) is one station to go in the direction of *Roppongi* and *Nakameguro*.

The reception desk and presentation rooms A, B and C are located on the 4th floor of the New Tower.

Room A : *Primrose*
Room B : *Mint*
Room C : *Iris Garden*

Wireless internet conncection is available at the conference venue (4th floor of the New Tower of Toranomon Pastoral Hotel) during the conference session period.

Enjoy lunches in *Aoi no Ma* on the ground floor of the Main Building. The banquet will be held in *Houou no Ma* on the ground floor of the New Tower.

Presentation

The technical programme will be run in three parallel sessions at Room A, B and Room C.

A total of 25 minutes is allocated for each speaker: 20 minutes for presentation and 5 minutes discussion. Please cooperate to keep your time during the presentation. Three sequential bells will be used for keeping time: First bell at 17 min for reminding, second at 20 min for ending presentation and third at 25 min for ending discussion. We do not allow the use of presonal laptop for presentation.

- Each room will have the followings: Projector, PC, appropriate size screen, and a laser pointer. Microsoft Power Point 2007 is available.
- Please install your presentation file at least two sessions before.
- Please check movie(s) and equation(s).
- Please check your USB memory is not infected with viruses.
- Speakers should sit in the front row of the session and approach the lectern in turns as the Chair of the session introduces each presentation.