



Dr. Nicholas C. Kraus Symposium
Florida Institute of Technology
Melbourne, Florida, USA
March 9-10, 2009



Monday, March 9, 2009

Welcome and Opening: 0830 – 0900

Session 1: Inlet Dynamics 0900 – 1020. Session Chair Robert Whalin

Recent Development of an Ebb-Tidal Shoal at an Old Stabilized Inlet, Shark River Inlet, New Jersey. *Nicholas C. Kraus, U.S. Army Engineer Research & Development Center, Coastal & Hydraulics Laboratory, Vicksburg, Mississippi.*

Review of Empirical Relationships Between Inlet Cross-Section and Tidal Prism. *Marcel J.F. Stive, Delft University of Technology, Delft, The Netherlands.*

The Impact of Opening a Tidal Inlet to Connect the Delaware Bay with a Wetland. *J. Richard Weggel, Department of Civil, Architectural & Environmental Engineering, Drexel University, Philadelphia, Pennsylvania.*

Equilibrium and Cross-sectional Stability of Midnight Pass, Florida. *Karyn Erickson, Erickson Consulting Engineers, Sarasota, Florida; and Jacobus van de Kreeke, University of Miami, Miami, Florida.*

Coffee Break: 1020 - 1050

Session 2: Coastal Processes 1050 – 1210. Session Chair Karyn Erickson

Lack of Evidence for Onshore Sediment Transport from Deepwater at Decadal Time Scales: Fire Island, New York. *Timothy W. Kana, Steven B. Traynum, and Daniel Johnson, Coastal Science & Engineering Inc., Columbia, South Carolina.*

Wave Setup behind a Detached Breakwater. *Douglas J. Sherman and Jean T. Ellis, Department of Geography, Texas A&M University, College Station, Texas; Lorenzo Cappiotti, Enzo Pranzini, and Per Luigi Aminti, University of Florence, Florence, Italy.*

Application of Non-Equilibrium Sediment Transport to Coastal Inlets. *Alejandro Sánchez, U.S. Army Engineer Research & Development Center, Coastal & Hydraulics Laboratory, Vicksburg, Mississippi; and Weiming Wu, National Center for Computational Hydroscience and Engineering, Oxford, Mississippi.*



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Mechanisms and Characteristics of High Speed Reef Rip Current. *Ryuichiro Nishi, Oceanography Group at Faculty of Fisheries, Kagoshima University, Kagoshima, Japan; Mario P. de Leon, Graduate School of Science and Engineering, Kagoshima University, Kagoshima, Japan; Kouji Horinouchi, Division of Hydrographic Survey, Japan Coast Guard, Okinawa, Japan; Yasuro Ohtani, I/O Technique Company, Tokyo, Japan; Nicholas C. Kraus, U.S. Army Engineer Research & Development Center, Coastal & Hydraulics Laboratory, Vicksburg, Mississippi; and Julianti K. Manu, United Graduate School, Kagoshima University, Kagoshima, Japan.*

Lunch: 1210 - 1310

Session 3: Overwash and Field Measurements 1310 – 1430.

Session Chair Richard Weggel

Interaction of Barrier Islands and Storms: Implications for Flood Protection.

Ty V. Wamsley, Mary A. Cialone, and Alison Sleath Grzgorzewski, U.S. Army Engineer Research & Development Center, Coastal & Hydraulics Laboratory, Vicksburg, Mississippi.

The Plover Paradox - People, Predators and Politics in West Hampton Dunes, Long Island, New York. *Gary A. Vegliante and Aram V. Terchunian, West Hampton Dunes, New York.*

Characteristics, Restoration and Enhancement of Southern California Lagoons.

M. Hany S. Elwany, Integrative Oceanography Division, Scripps Institution of Oceanography, La Jolla, California.

Willapa Bay, Pacific Ocean, Shoreline Erosion Protection Groin/Breakwater.

Vladimir Shepshis and Scott Hicks, Coast & Harbor Engineering, Inc., Austin, Texas.

Coffee Break: 1430 - 1500

Session 4: Numerical Modeling 1500 – 1620. Session Chair James Houston

The Need for Model Performance Measures in reporting Numerical Models of Coastal Processes. *Terry Healy, Coastal Marine Group, Department of Earth and Ocean Sciences, University of Waikato, New Zealand.*

Numerical Modeling of Humboldt Bay Harbor and the Development of the Nearshore Placement Site. *Jonathan Guerrero, San Francisco District, U.S. Army Corps of Engineers, San Francisco, California.*



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CMS-Wave: A Coastal Wave Model for Inlets and Navigation Projects. *Lihwa Lin and Zeki Demirbilek, U.S. Army Engineer Research & Development Center, Coastal & Hydraulics Laboratory, Vicksburg, Mississippi; and Hajime Mase, Disaster Prevention Research Institute, Kyoto University, Kyoto, Japan.*

Measurements and Modeling of Gravel Transport under Wind Waves, Vessel-Generated Waves and Tidal Currents. *Phil Osborne, Golder Associates, Redmond, Washington; Neil Macdonald, Coldwater Consulting Ltd., Ottawa, ON; and Greg Curtiss, Golder Associates, Redmond, Washington.*

Introduction to Poster Session 1: 1620 – 1700. Session Chair Marcel Stive

Poster Session 1: 1700 – 1800.

Navigation Improvements, Mouth of the Colorado River, Texas. *Daniel J. Heilman and Robert C. Thomas, HDR, Corpus Christi, Texas.*

Infragravity Waves at Packery Channel. *Chris Reed, URS Corporation, Tallahassee, Florida.*

Beach Nourishment on the Tróia Peninsula, Portugal. *Tanya M. Silveira, Institute of Marine and Coastal Sciences, Rutgers University, New Brunswick, New Jersey; Nicholas C. Kraus, U.S. Army Engineer Research & Development Center, Coastal & Hydraulics Laboratory, Vicksburg, Mississippi; and Norbert P. Psuty, Institute of Marine and Coastal Sciences, Rutgers University, New Brunswick, New Jersey.*

Regional Morphology Analysis Package: Past, Present, Future. *Wayne W. Tanner and Steven G. Antrim, Applied Research Associates, Vicksburg, Mississippi; Nicholas Kraus and Andrew Morang, U.S. Army Engineer Research & Development Center, Coastal & Hydraulics Laboratory, Vicksburg, Mississippi.*

Engineering and Construction of Wheeler North Reef San Clemente, California. *M. Hany S. Elwany, Integrative Oceanography Division, Scripps Institution of Oceanography, La Jolla, California.*

Piper Channel, Texas: Sedimentation and Erosion Reduction Measure. *Vladimir Shepsis and Scott Hicks, Coast & Harbor Engineering, Inc., Austin, Texas.*



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Coastal Numerical Modeling of New Buffalo, Michigan. *Lihwa Lin and Donald K. Stauble, U.S. Army Engineer Research & Development Center, Coastal & Hydraulics Laboratory, Vicksburg, Mississippi; and Phillip C. Ross, U.S. Army Engineer District, Detroit, Michigan.*

Sediment Transport on Raked and Unraked Backshore Environments. *Karl F. Nordstrom, Institute of Marine and Coastal Sciences, Rutgers University, New Brunswick, New Jersey; and Nancy L. Jackson, Department of Chemistry and Environmental Science, New Jersey Institute of Technology, Newark, New Jersey.*

Social at the Crowne Plaza Hotel Melbourne, FL: 1900 - 2030

Tuesday, March 10, 2009

Session 5: Case Studies 0830 – 0950. Session Chair Ryuichiro Nishi

Sand Transport Pathways and Magnitudes along the Mississippi Sound Barrier Islands. *Mark R. Byrnes and Sarah F. Griffee, Applied Coastal Research and Engineering, Mashpee, Massachusetts; and Julie D. Rosati, U.S. Army Engineer Research & Development Center, Coastal & Hydraulics Laboratory, Mobile, Alabama.*

Shoreline Change and Longshore Bar Migration at Hasaki, Japan. *Yoshiaki Kuriyama, Takayuki Suzuki, Sinichi Yanagishima, Kenichi Uzaki and Yoshio Ishino, Port and Airport Research Institute, Yokosuka, Japan.*

A Global Analysis of Coastal Erosion due to Sea-Level Rise: An Application of DIVA. *Robert J. Nicholls and the DINAS-COAST consortium, University of Southampton, Southampton, UK.*

Sea Level Variability, Coastal Evolution and Assessment of Intrinsic Uncertainty. *Miguel A. Losada, Asunción Baquerizo, and Miguel Ortega-Sánchez, Grupo de Dinámica de Flujos Ambientales, CEAMA-University of Granada, Avda. del Mediterráneo, s/n, Granada, Spain.*

Coffee Break: 0950 - 1050



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Session 6: Sediment Management and Case Studies 1050 – 1140.
Session Chair Luis Moreno

Beach Nourishment, Groin Modification and Dune Growth at Westhampton Beach, New York, 1996-2008. *Lynn M. Bocamazo, U.S. Army Corps of Engineers District, New York, New York.*

Groin Modification Guidance for Improved Local and Regional Sediment Transport.

Thomas O. Herrington, Stevens Institute of Technology, Castle Point on Hudson, Hoboken, New Jersey; Kelly L. Rankin, U.S. Army Corps of Engineers District, Jacksonville; Michael S. Bruno and Jon K. Miller, Stevens Institute of Technology, Castle Point on Hudson, Hoboken, New Jersey.

Performance of Experimental Beach Fill and Dune, Jefferson County, Texas. *David B. King, Jeffrey P. Waters, and Ty Wamsley, U.S. Army Engineer Research & Development Center, Coastal & Hydraulics Laboratory, Vicksburg, Mississippi.*

Lunch: 1140 - 1240

Session 7 Sediment Management and Case Studies 1240 – 1400.
Session Chair Lynn Bocamazo

Cross-scale Modeling of Large-Scale Coastal Systems. *Alan W Niedoroda, Himangshu Das, and Christopher W. Reed, URS Corporation, Tallahassee, Florida.*

Riverine Sand Mining / Scofield Island Restoration. *Michael Poff, P.E., Coastal Engineering Consultants, Inc., Naples, Florida; Rachel Sweeney, NOAA Fisheries, U.S. Department of Commerce, Military Science Building, c/o Louisiana State University, Baton Rouge, Louisiana; Kenneth Bahlinger and Maury Chatellier, Louisiana Department of Natural Resources, Baton Rouge, Louisiana; and Aaron Bass, SJB Group, LLC, Baton Rouge, Louisiana.*

Fixed Sand Bypassing Plants – Status and Future. *James E. Clausner, U.S. Army Engineer Research & Development Center, Coastal & Hydraulics Laboratory, Vicksburg, Mississippi.*
Protection Measures along Sandy Coastlines: Selected Concepts and Experiences from Projects along The German Coastline. *Hans H. Dette and Hocine Oumeraci, Leichtweiss-Institut, Technical University Braunschweig, Braunschweig, Germany.*



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Coffee Break: 1400 – 1430

Session 8: Sediment Transport and Adventures with Nick 1430 – 1550.
Session Chair Alan Niedoroda

A New Formula for the Total Longshore Sediment Transport Rate. *Atila Bayram, Halcrow, New York; Magnus Larson and Hans Hanson, Department of Water Resources Engineering, Lund University, Lund, Sweden.*

Shipsed and PTM – Two Integrated CMS Models for Inlets and Navigation Channels. *Neil MacDonald and Michael Davies, Coldwater Consulting Ltd., Ottawa, ON; Zeki Demirbilek and Tahirih Lackey, U.S. Army Engineer Research & Development Center, Coastal & Hydraulics Laboratory, Vicksburg, Mississippi; and Philip Osborne, Golder Associates, Redmond, Washington.*

Re-Engineering the Mississippi River as a Sediment Delivery System.
Harley S. Winer, PBS&J, Inc., New Orleans, Louisiana.

“A Worthy Adversary – the Canaveral Harbor Entrance Story”.
Michael Walther, Coastal Tech, Vero Beach, Florida.

Introduction to Poster Session 2: 1550 – 1640. Session Chair Tim Kana

Poster Session 2: 1640– 1740

Monitoring Incipient Breaching at an Artificial Inlet: The Letting of Georgica Pond, NY. *Henry Bokuniewicz, Marine Sciences Research Center, School of Marine and Atmospheric Sciences, Stony Brook University, Stony Brook, New York; Nicholas Kraus and Sophie Munger, U.S. Army Engineer Research & Development Center, Coastal & Hydraulics Laboratory, Vicksburg, Mississippi; Michael Slattery and Ruth Coffey, Marine Sciences Research Center, School of Marine and Atmospheric Sciences, Stony Brook University, Stony Brook, New York.*
Combined Eulerian and Lagrangian Approach to Modeling Seasonal Variability of Sediment Transport and Morphology Change at Moriches Inlet, Long Island, NY. *Kenneth J. Connell, Golder Associates, Redmond, Washington.*

Long-Term Evolution of a Long-Term Evolution Model. *Hans Hanson, Department of Water Resources Engineering, Lund University, Lund, Sweden; Nicholas C. Kraus and Mark B. Gravens,*



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U.S. Army Engineer Research & Development Center, Coastal & Hydraulics Laboratory, Vicksburg, Mississippi; Magnus Larson, Department of Water Resources Engineering, Lund University, Lund, Sweden.

Modeling Subaerial Sediment Transport and Profile Change on a Beach. *Magnus Larson, Department of Water Resources Engineering, Lund University, Lund, Sweden; Nicholas C. Kraus, U.S. Army Engineer Research & Development Center, Coastal & Hydraulics Laboratory, Vicksburg, Mississippi; Li Erikson, USGS Pacific Science Center, Santa Cruz, California; and Chantal Donnelly, Swedish Meteorological and Hydrological Institute, Norrköping, Sweden.*

Inlet Evolution Modeling of Multiple Inlet Systems in Southwest Florida.

Mohamed A. Dabees, Humiston & Moore Engineers, Naples, Florida.

Measuring and Modeling Sedimentation Pattern in a Stabilized Migratory Inlet, Blind Pass, Florida. *Ping Wang and Tanya M. Beck, Department of Geology, University of South Florida, Tampa, Florida; and Nicholas C. Kraus, U.S. Army Engineer Research & Development Center, Coastal & Hydraulics Laboratory, Vicksburg, Mississippi.*

High-Frequency Change in Nearshore and Channel Morphology and Inlet Functionality at Packery Channel, Corpus Christi, Texas. *Deidre D. Williams, Division of Nearshore Research, The Conrad Blucher Institute for Surveying and Science, Texas A&M University, Corpus Christi, Texas; and Nicholas C. Kraus, U.S. Army Engineer Research & Development Center, Coastal & Hydraulics Laboratory, Vicksburg, Mississippi.*

An Implicit 2-D Solver of Shallow Water Flow Based on Telescoping Rectangular Mesh. *Weiming Wu and Mingliang Zhang, National Center for Computational Hydroscience and Engineering, University of Mississippi, Oxford, Mississippi; and Alejandro Sanchez, U.S. Army Engineer Research & Development Center, Coastal & Hydraulics Laboratory, Vicksburg, Mississippi.*

Channel Deepening of Houma Navigation Channel at Cat Island Pass, Louisiana.

Julie D. Rosati, U.S. Army Engineer Research & Development Center, Coastal & Hydraulics Laboratory, Mobile, Alabama.

Physical Characterization of Nearshore and Offshore Borrow Sites on the Inner Continental Shelf of Northeast and West Florida. *Gary A. Zarillo, Department of Marine and Environmental Systems, Florida Institute of Technology, Melbourne, Florida; and Kim A. Zarillo, Scientific Environmental Applications, Inc., Melbourne, Florida.*

Dinner: Florida Tech Hartley Room 1930 - 2200



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Wednesday March 11, 2009

Optional Field Trip to Melbourne area Barrier Island and Tidal Inlet
Environments: 0900 – 1400



Venue: Hartley Room, Florida Institute of Technology

The Hartley Room is located on the second floor of the Denius Student Center. From the parking lot, walk across Country Club Road, past the Keuper Administration Building and through Panther Plaza to reach the Denius Student Center.

