# 24<sup>TH</sup> ANNUAL NATIONAL CONFERENCE ON BEACH PRESERVATION TECHNOLOGY

# **FEBRUARY 9-11, 2011**

HYATT REGENCY JACKSONVILLE RIVERFRONT JACKSONVILLE, FLORIDA

> "AMERICA'S LARGEST ANNUAL CONFERENCE ON BEACH PRESERVATION TECHNOLOGY!"

### CONFERENCE OBJECTIVES

- To present the latest in beach preservation technology, research, and real-world practice.
- To provide a technological transfer from the scientific and engineering community to government officials who make the decisions on coastal projects and policies.

### CONFERENCE HIGHLIGHTS

The Conference Planning Committee once again received an exceptional group of abstracts for 2011 addressing a broad range of topics -- beach nourishment projects, shore-protection and beach management policy, environmental issues, the use of coastal structures, modeling, and more.

Just a select sampling of information-packed presentations to look forward to:

- The Expiration of Project Life for Congressionally Authorized Shore Protection Projects
- Several presentations from the U.S. Army Corps of Engineers, from coast to coast
- Sea Level Acceleration Characteristics in the 20th Century: U.S. Gages
- Two presentations on the effects of beach nourishment on sea turtles
- Initial Beach Response of an Open Coast Erosional Hotspot to Permeable Adjustable Groins
- Beach Management Program Sustainability

Given the quality and diversity of the presentations, and a new "city" venue which is home to the U.S. Army Corps of Engineers, Jacksonville District, and one of Florida's oldest shore-protection projects, we hope you will join us at the 2011 Tech Conference.

Wakeup Thursday, February 10, 8:00 a.m. "Beaches 101 Series: Coastal Structures" with Dr. Kevin Bodge

### WHO SHOULD ATTEND?

**Public and Private Sector Engineers Coastal Managers U.S. Army Corps of Engineers Coastal Geologists City and County Engineers** Natural Resource and Environmental Protection Agencies Marine Biologists and Scientists **City and County Managers** Academic Researchers **Public Works Directors Environmental Scientists Coastal Surveyors** Legislators and Legislative Staff **City and County Commissioners** Local and Regional Planners **Tourist Development Councils** Hotel and Resort Executives **Coastal Development Interests Coastal Property Owners** 

#### 1:00 p.m. Welcome

1:10 p.m.

#### **Beach Renourishment in Duval County**

Steve Howard, P.E. and Kevin Bodge, Ph.D., P.E., Olsen Associates, Inc., Jacksonville, FL and Tom Martin, U.S. Army Corps of Engineers, Jacksonville District, FL

#### 1:40 p.m.

Sea Level Acceleration Characteristics in the 20th Century: U.S. Gages Robert Dean, Ph.D., P.E., Department of Civil and Coastal Engineering, University of Florida, Gainesville, FL and Jim Houston, Ph.D., U.S. Army Engineer Research and Development Center, Vicksburg, MS

#### 2:05 p.m.

# The Expiration of Project Life For Congressionally Authorized Shore Protection Projects

Erik Olsen, P.E., Olsen Associates, Inc., Jacksonville, FL

#### 2:30 p.m.

#### Shore Protection Needs vs. Environmental Protection: The U.S. Army Corps of Engineers Denial of the Winthrop Beach Nourishment Program

John Ramsey, P.E., Applied Coastal Research and Engineering, Inc., Mashpee, MA, Joseph Orfant, Massachusetts Department of Conservation and Recreation, Boston, MA, and John Burckardt, P.E., Parsons Brinckerhoff, Boston, MA

#### 2:55 p.m. Professional Exchange Break

#### 3:25 p.m.

#### South Naples Erosion Control Project

Brett Moore, P.E. and Marc Damon, P.E., Humiston & Moore Engineers, Naples, FL

#### 3:50 p.m.

#### Initial Beach Response of an Open Coast Erosional Hotspot to Permeable Adjustable Groins

Douglas Mann, P.E., Coastal Planning & Engineering, Inc., Boca Raton, FL

#### 4:15 p.m.

#### Holiday Isle Emergency Beach Fill Project – Destin, FL

Matthew Trammell, P.E. and Michael Trudnak, P.E., Taylor Engineering, Inc., Jacksonville, FL

#### 4:40 p.m.

# A Brief History of Headland Breakwaters for Shore Protection in Chesapeake Bay, USA

C. Scott Hardaway, Jr., Virginia Institute of Marine Science, College of William and Mary, Gloucester Point, VA and James Gunn, Coastal Design and Construction, Inc., Gloucester, VA

5:05 p.m. **Adjourn** 

6:30 p.m. Welcome Reception

# THURSDAY, FEBRUARY 10, 2011 - CONCURRENT SESSIONS 8:50 A.M. TO 10:05 A.M.

8:00 a.m. to 8:45 a.m. COASTAL STRUCTURES 101 - Kevin Bodge, Ph.D., P.E., Olsen Associates, Inc., Jacksonville, FL

### **SESSION A**

#### 8:50 a.m.

Wave Effects Near Bathymetric Depressions Luce Bassetti, Ph.D., Halcrow, Inc., Tampa, FL and Sean O'Neil, Ph.D., Halcrow, Inc., New York, NY

#### 9:15 a.m.

#### Sand Bar Characteristic Responses to Different Wave Energy Conditions

Luciano Absalonsen and Robert Dean, Ph.D., P.E., Department of Civil and Coastal Engineering, University of Florida, Gainesville, FL

#### 9:40 a.m.

## Nearshore Sandbar Evolution in Palm Beach County, Florida

Mohamed Dabees, Ph.D., P.E., Brett Moore, P.E., and Ken Humiston, P.E., Humiston & Moore Engineers, Naples, FL

10:05 a.m. Professional Exchange Break

### **SESSION B**

#### 8:50 a.m.

#### National Shoreline Erosion Control Development and Demonstration Program (Section 227) 63<sup>rd</sup> St. "Hotspot" Miami Beach Demonstration Project

Donald Ward and John McCormick, Coastal and Hydraulics Laboratory, U.S. Army Engineer Research and Development Center, Vicksburg, MS

#### 9:15 a.m.

### Design of Artificial Beaches and Improvement of Rocky Shore Natural Beaches

Juan Font and Alberto Silva, Ph.D., Ingeniería de Consulta Incostas S. A., Caracas, Venezuela

#### 9:40 a.m.

#### Design, Construction, and Performance of the Boscombe Multi-Purpose Reef

Shaw Mead, Ph.D., Jose Borrero, Ph.D., and John Hearin, ASR Limited, Marine Consulting and Research, Cocoa Beach, FL

#### 10:05 a.m. Professional Exchange Break

# Thursday, February 10, 2011 - CONCURRENT SESSIONS 10:35 A.M. TO 12:15 P.M.

### **SESSION C**

#### 10:35 a.m.

#### 2010 Wave Climate of Brevard County, FL: Spatial and Temporal Variability from Post Nourishment Monitoring, Including the 2010 Atlantic Hurricane Season

Charles Cimaglia and Charles Hutcherson, TNC Oceanographic, Melbourne, FL

#### 11:00 a.m.

#### Swamped – Passing Vessel Impacts for Shoreline Protection

Ronald McPherson, HDR Engineering, Inc., Corpus Christi, TX and Wesley Dortch, P.E., HDR Engineering, Inc., Jacksonville, FL

#### 11:25 a.m.

#### **Brevard County, Florida, Mid-Reach Segment, Hurricane and Storm Damage Reduction Project: A Planning Perspective** Candida Bronson, P.E., U.S. Army Corps of Engineers, Jacksonville District, FL

#### 11:50 a.m.

## Considerations for Beach Design: Incorporating Large Storms into Renourishment Projects

Nicole Sharp and Stephen Keehn, P.E., Coastal Planning & Engineering, Inc., Boca Raton, FL

#### 12:15 p.m. Luncheon

### **SESSION D**

#### 10:35 a.m.

# Assessment of Turbidity Mixing Zone Requirements: A Case Study of the 2010 North Boca Raton Renourishment

Peter Seidle, P.E., Applied Technology and Management, Inc., West Palm Beach, FL and Jennifer Bistyga, City of Boca Raton, FL

#### 11:00 a.m.

#### The Use of Sidescan Sonar and Acoustic Classification for Benthic Habitat Mapping; an Alternative Methodology for Environmental Monitoring

Beau Suthard, P.G. and Christopher Dougherty, Coastal Planning & Engineering, St. Petersburg, FL and Jeffrey Andrews, PSM CH, Coastal Planning & Engineering, Boca Raton, FL

#### 11:25 a.m.

#### Indian River County Sector 3 Restoration Phase 1: Comparison of the Predicted and Post-Construction Equilibrated Toe of Fill and an Assessment of the Upland Sand Fill

Walker Dawson, Coastal Technology Corp., Melbourne, FL and Tem Fontaine, Coastal Technology Corp., Vero Beach, FL

#### 11:50 a.m.

#### Indian River County Sector 7 – Update and Assessment after 3-Years of Post-Physical and Biological Construction Monitoring Michael Jenkins, Ph.D., P.E., Applied Technology and Management,

Inc., West Palm Beach, FL and James Gray, Jr., Indian River County, Vero Beach, FL

### **SESSION E**

#### 1:30 p.m.

#### Nearshore Field Study at Grays Harbor, WA

Irene Watts and Alejandro Sanchez, Coastal and Hydraulics Laboratory, U.S. Army Engineer Research and Development Center, Vicksburg, MS, and Ken Connell and Philip Osborne, Golder Associates, Inc., Redmond, WA

#### 1:55 p.m.

#### Sediment Transport Modeling and Application for Ocean Beach and San Francisco Bight, CA

Honghai Li and Lihwa Lin, Coastal and Hydraulics Laboratory, U.S. Army Engineer Research and Development Center, Vicksburg, MS and Frank Wu, Lisa Andes, and James Zoulas, U.S. Army Corps of Engineers, San Francisco District, CA

#### 2:20 p.m.

# Nearshore Dredged Material Placement Pilot Study at Noyo Harbor, CA

Lihwa Lin, Honghai Li, and Mitchell Brown, Coastal and Hydraulics Laboratory, U.S. Army Engineer Research and Development Center, Vicksburg, MS and Frank Wu and Lisa Andes, U.S. Army Corps of Engineers, San Francisco District, CA

#### 2:45 p.m.

# Evaluation of Placement Alternatives for Matagorda Ship Channel Bottleneck Removal

James Rosati III, and Ashley Frey, Coastal and Hydraulics Laboratory, U.S. Army Engineer Research and Development Center, Vicksburg, MS

#### 3:10 p.m. Professional Exchange Break

### SESSION F

#### 1:30 p.m.

#### **Inlet Navigation Channel Shoaling**

Julie Dean Rosati, Ph.D., P.E., Coastal and Hydraulics Laboratory, U.S. Army Engineer Research and Development Center, Mobile, AL and Nicholas Kraus, Ph.D., Coastal and Hydraulics Laboratory, U.S. Army Engineer Research and Development Center, Vicksburg, MS

#### 1:55 p.m.

# Inlet Management Strategies for East Pass, Destin, FL: Past, Present, and Future

Thomas Pierro, P.E., Christopher Day, P.E., and Norman Beumel, Coastal Planning & Engineering, Inc., Boca Raton, FL

#### 2:20 p.m.

#### Two Inlets and an Island

James Marino, P.E., Coastal Technology Corp., Debary, FL, Cliff Truit, Ph.D., P.E., Coastal Technology Corp., Sarasota, FL, and Laird Wreford and Spencer Anderson, P.E., Sarasota County, FL

#### 2:45 p.m.

# Sebastian Inlet District Dredged Material Management Area and Tide Pool Restoration Projects

Bryan Flynn, P.E. and Jeffrey Tabar, P.E., PBS&J, Tampa, FL, S. Marie Romah, P.E., PBS&J, Melbourne, FL, and Martin Smithson, Sebastian Inlet District, FL

3:10 p.m. Professional Exchange Break

# THURSDAY, FEBRUARY 10, 2011 - CONCURRENT SESSIONS 3:40 P.M. TO 5:20 P.M.

### **SESSION G**

#### 3:40 p.m.

## Challenges in Calibrating and Verifying a MIKE21 Model for Evaluation of Shoreline Stabilization Alternatives

Kristen Odroniec and Michael Kabiling, Ph.D., P.E., Taylor Engineering, Inc., Jacksonville, FL

#### 4:05 p.m.

# Scientific Approach to Design, Modeling and Implementation of Protection Measures in the Fast Currents of Inlets

Samantha Danchuk, Ph.D., Thomas Campbell, P.E., and Christopher Day, P.E., Coastal Planning & Engineering, Inc., Boca Raton, FL

#### 4:30 p.m.

# Development and Application of Mid- and High-Rise Building Damage Functions in Beach-*fx*

Michael Krecic, P.E. and Jon Hall, Taylor Engineering, Inc., Jacksonville, FL and Christopher Jones, P.E., Durham, NC

#### 4:55 p.m.

#### Modeling Sediment Transport Patterns and Pathways in Mixed-Energy Tidal Inlet Systems

Edwin Elias, Ph.D., Deltares, Delft, the Netherlands and U.S. Geological Survey, Menlo Park, CA and Maarten van Ormondt, Deltares, Delft, the Netherlands

### SESSION H

#### 3:40 p.m.

## Status Update on Three Regional Biological Opinions in South Atlantic Division

Terri Jordan-Sellers, U.S. Army Corps of Engineers, Jacksonville District, FL

#### 4:05 p.m.

**Marine Turtles: Species-Specific Response to Beach Nourishment** Robbin Trindell, Ph.D., Meghan Koperski, and Kelly Roberts, Florida Fish and Wildlife Conservation Commission, Tallahassee, FL

#### 4:30 p.m.

Assessing the Effects of Beach Restoration on Sea Turtles Residing in Adjacent Nearshore Habitats – Indian River County, Florida Jonathan Gorham, Ph.D., Michael Bresette, and Richard Herren, Inwater Research Group, Inc., Jensen Beach, FL, Peter Seidle, P.E., Applied Technology and Management, Inc., West Palm Beach, FL, and James Gray, Jr., Indian River County, FL

#### 4:55 p.m.

#### The Restoration of Historic Deadman's Island

Heather Reed, Ecological Consulting Services, Inc., Pensacola, FL

5:20 p.m. Adjourn

### FRIDAY, FEBRUARY 11, 2011 - CLOSING SESSION 8:10 A.M. TO 12:00 P.M.

#### 8:10 a.m.

#### Monitoring Shore Protection and Navigation Projects Using Three-Dimensional Spatial Data Along Florida's Panhandle

Lauren Dunkin, Coastal and Hydraulics Laboratory, U.S. Army Engineer Research and Development Center, Kiln, MS

#### 8:35 a.m.

# FDEP Bureau of Beaches and Coastal Systems Monitoring and Reporting Guidelines

Michael Barnett, P.E., Florida Department of Environmental Protection, Tallahassee, FL

#### 9:00 a.m.

#### Beach Management Program Sustainability

Christopher Creed, P.E., Olsen Associates, Inc., Jacksonville, FL and Scott Liggett, P.E., Town of Hilton Head Island, SC

#### 9:25 a.m.

Shore Protection through Alternative Energy Devices Kevin Bodge, Ph.D., P.E., Olsen Associates, Inc., Jacksonville, FL

9:50 a.m. Professional Exchange Break



Jacksonville Beach Pier photo courtesy of Visit Jacksonville



Big Talbot Island photo courtesy of Visit Jacksonville

#### 10:20 a.m.

#### Simulating the Fate of Sediment Plumes Discharged from Mississippi and Atchafalaya Rivers: An Integrated Observation and Modeling Study for the Louisiana Shelf, USA

Mohammad Nabi Allahdadi, Felix Jose, Ph.D., Gregory Stone, Ph.D., and Eurico D'Sa, Ph.D., Department of Oceanography and Coastal Sciences, Coastal Studies Institute, Louisiana State University, Baton Rouge, LA

#### 10:45 a.m.

#### Coastal Processes Analysis for Vilano Beach, St. Johns County, FL

Hande Caliskan, Christopher Bender, Ph.D., P.E., and Michael Krecic, P.E., Taylor Engineering, Inc., Jacksonville, FL and Jason Engle, P.E., U.S. Army Corps of Engineers, Jacksonville District, FL

#### 11:10 a.m.

#### Quantifying Temporal Variations in Local Sediment Budget for Sand Resource Management at Sebastian Inlet, FL

Gary Zarillo, Ph.D. and Florian Brehin, Department of Marine and Environmental Systems, Florida Institute of Technology, Melbourne, FL

#### 11:35 a.m.

#### Regional Sediment Management – Application of a Coastal Numerical Model at the St. Johns River Entrance

Steve Bratos, U.S. Army Corps of Engineers, Jacksonville District, FL

12:00 noon Conference Adjourns

### 12th Annual CIRP Technology-Transfer Workshop - February 7-9, 2011 "Modeling and Decision-Support Tools for Coastal Inlets"

The Coastal Inlets Research Program (CIRP) is pleased to celebrate our 12th Annual Technology-Transfer Workshop in conjunction with the 24th Annual National Conference on Beach Preservation Technology. The CIRP workshop will be held just prior to the FSBPA conference at the Hyatt Regency Jacksonville Riverfront from Monday, February 7th through Wednesday, February 9th (half day), 2011. This workshop will feature hands-on applications for several CIRP products:

- The Coastal Modeling System (CMS), an integrated suite of physics-based numerical models for calculation of waves, currents, sediment transport, and morphology change at coastal inlets available in the Surface–water Modeling System (SMS);
- GenCade, a regional inlet and shoreline response model available in SMS that builds off the success of the popular GENESIS and Cascade shoreline models, but also includes inlet sources and sinks within the regional system;
- The Regional Morphology Analysis Package (RMAP), an integrated set of calculation tools developed for manipulating, analyzing, visualizing, and archiving data on shoreline positions and beach profiles in a geo-referenced environment on a personal computer;
- The Tidal Analysis and Prediction Software (TAPS), a desktop computer program that allows a time series of
  water level measurements to be separated into tidal and non-tidal components using a selective least squares
  harmonic reduction employing up to 35 tidal constituents; and
- An overview of recent advances in the Channel Portfolio Tool (CPT) and the Coastal Structures Management, Analysis, and Ranking Tool (CSMART), web-based decision-support systems that facilitate comparison of commodities and economics associated with navigation of USACE waterways, will be presented.

The CIRP workshop is structured to maximize hands-on applications of many of these CIRP products, with a focus on CMS and GenCade. *Personal Computers pre-loaded with software will be provided*.



photo courtesy of the USACE Jacksonville District

### **Workshop Registration**

**Registration fee: \$275** For more information including the agenda and to register online for the workshop, visit www.fsbpa.com/workshop.htm

### **Hotel Information**

Hotel reservations for the Hyatt Regency Jacksonville Riverfront can be made online. The group rate is \$125 single/double. For complete details, visit www.fsbpa.com/techhotel.htm

# **CONFERENCE REGISTRATION**

#### **Early Registration**

through January 14, 2011

Member Registration\$325Non-Member Registration\$375Student Registration\$125\*

#### **Regular Registration**

after January 14, 2011Member Registration\$375Non-Member Registration\$425Student Registration\$125\*dent ID with registration\$125\*

\* must provide valid student ID with registration

To register, please go to **www.fsbpa.com/techregistration.htm** You can register online or print out a registration form and e-mail, fax, or mail to us at the address below.

For more information on the conference and sponsorship/exhibit opportunities, please contact: Teri Besse Conference Manager FSBPA PO Box 13146 Tallahassee, FL 32317 Phone: (850) 906-9227 Fax (850) 201-6782 mail@fsbpa.com | www.fsbpa.com

#### Cancellations

Cancellation requests must be made in writing and received on or before January 28, 2011. A \$50 processing fee will be assessed. No refunds will be made for cancellations received after January 28, 2011.

Florida Engineers who attend and sign in at the registration desk are eligible to receive CEU's. FSBPA's exempt provider number is EXP 0003914.

# HOTEL RESERVATIONS

Make your reservation directly with the hotel

### Hyatt Regency Jacksonville Riverfront

225 East Coastline Drive Jacksonville, FL 32202

#### **Reservations:**

Standard Room \$125 single/double

Make your reservation online at **www.fsbpa.com/techhotel.htm** or call 888-421-1442 or 402-592-6464. Be sure to mention FSBPA to receive the conference group rate.

To ensure that a room is available, reservations **MUST** be made by January 14, 2011.

After this date, rooms MAY NOT be available.

*Complimentary self-parking for overnight guests. Complimentary WIRED internet access in guest rooms.* 



Welcome Day Parade at Jacksonville Beach, Florida

### CONFERENCE ORGANIZER

Florida Shore & Beach Preservation Association

With the valuable assistance of the 2011 Conference Planning Committee and Lisa Armbruster, FSBPA

PLANNING COMMITTEE - EXECUTIVE MEMBERS

Michael Barnett, P.E., Florida Department of Environmental Protection Kevin Bodge, Ph.D., P.E., Olsen Associates (Florida) Douglas Mann, P.E., Coastal Planning & Engineering (Florida)

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image provided by Beaches Area Historical Society, Jacksonville, FL