Wetlands 2007 Policy Panel

Scott C. Hagen, Ph.D., P.E.
Civil & Environmental Engineering

Yuji Funakoshi, Ph.D. now at NOAA/NOS
D. Michael Parrish, Ph.D., P.E., now at Dewberry
Peter Bacopoulos, Ph.D. Qualified
Qing Wang, Ph.D. Student
Stephen Medeiros, Ph.D. Student
David Coggin, Masters Student
Naeko Takahashi, Masters Student
Derek Giardino, Masters Student

Coastal Hydroscience Analysis, Modeling & Predictive Simulations Laboratory
http://champs.cecs.ucf.edu
Overview

• Related Applications
• Wetlands and Sediment Management Committee
  – Subcommittee on
    • Coastal and River Modeling and Analysis
Western Atlantic, Gulf of Mexico & Caribbean Sea

Gulf of Mexico
Caribbean Sea
Atlantic Ocean
Florida’s East Coast
Open-Ocean Boundary, 60°W Meridian

Bathymetry (m, MSL)

0  1000  2000  3000  4000  5000  6000  7000  8000
Florida East Coast (Wet-Only Mesh)
Florida East Coast (Wet-Only Mesh)
Flow Exchange of the Tidal Marsh Areas with the St Johns River
Do we need topographic/bathy data?

Cross-sections from 1932 (red dots)
Note: Aerials are circa 2000; St. Johns River and Atlantic Intracoastal Waterway cross sections are from 1993.
Hurricane Ivan Beach Erosion

Pre-Hurricane Ivan (6/2/04)  Post-Hurricane Ivan (9/18/04)

Source: FDEP / Bureau of Beaches and Coastal Systems
ASCE/COPRI Committee Work

- **Member:** Wetlands and Sediment Management Committee
  - Chaired by Dominic Izzo, P.E., F.ASCE

- **Subcommittee Chair:**
  Coastal and River Modeling and Analysis

  - **Members:** Dilip Barua, Jim Chen, Will Glamore, Weixia Jin, Say Chong Lee, George Nichol, Lucas Sharkey, Clinton Thurlow, & Dan Veriotti

*New members welcome!*

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Subcommittee on Coastal and River Modeling and Analysis

• Objectives:

1) To study and share information on techniques for computational modeling and data collection and dissemination

2) To support computational modeling for wetland restoration, creation, protection and management and for managing sediments in or removed from coastal or inland projects
Subcommittee on Coastal and River Modeling and Analysis

- **Products:**

  1) Technical summary in form of a white paper, "State-of-the-art in Computational Hydrodynamic Modeling"

  2) Technical summary and recommendations, "State-of-the-art and Recommendations for Data Collection and Dissemination"