

## RESUME



### **HAIQING LIU KACZKOWSKI, PhD, PE** **Senior Coastal Engineer**

#### **Education and Academic Training**

Post Doctoral Fellow, Coastal Engineering,  
University of Florida (UF), 2000-2002  
PhD. Coastal Engineering, Tianjin University  
(TJU), China, 1996  
MS. Water Resources, TJU 1993  
BS. Civil Engineering, TJU 1990

#### **Experience Highlights**

Dr. Kaczowski joined Coastal Science & Engineering (CSE) in 2010. Prior to joining CSE, she was a senior coastal engineer and numerical modeler at Applied Technology and Management (ATM). She has extensive experience in hydrodynamics, wave motion, storm analysis, sediment transport, water quality, and coastal process modeling. She has used state-of-the-art modeling tools in conjunction with engineering experience to design successful coastal development projects located in North America, the Caribbean, the Middle East, and Asia.

Dr. Kaczowski designed and executed a physical model to study nearshore sediment transport and developed a numerical model to predict cross-shore sediment transport and equilibrium beach profiles for post-doctoral research at the University of Florida.

#### **Numerical Modeling Skills**

Dr. Kaczowski has demonstrated numerical modeling expertise with the following models:  
EFDC, WQMAP, RMA2, ADCIRC,  
GENESIS, SWAN, STWAVE, CGWAVE,  
BOUSS2D, SSFATE, D-CORMIX,  
VISUAL PLUMES, WAMVIEW.

#### **Hydrodynamic and Sediment Studies**

Dr. Kaczowski has used two- and three-dimensional EFDC and WQMAP hydro-

dynamic and sediment transport models to evaluate potential environmental issues of proposed projects. The model results were used to support the development of an environmental impact statement (EIS). Selected projects included a marine container terminal for SC State Ports Authority, Charleston (SC); navigation channel deepening and a container terminal for Georgia State Ports Authority, Savannah (GA); and Midnight Pass Inlet reopening, Sarasota (FL).

**Flushing Studies** – Used two- and three-dimensional hydrodynamic and mass transport models to evaluate the flushing characteristics of the proposed marinas and canal systems for more than 50 projects.

**Wave Studies** – For a variety of projects, Dr. Kaczowski used a larger scale wave model (SWAN) to first capture the transformation of offshore waves to the nearshore region at the project site, and then used a finer scale wave model (CGWAVE or Bouss2D) nested within the SWAN model grid to assess the local wave refraction and diffraction around the proposed breakwater structure and inside the proposed marina basin.

**Storm Surge Studies** – Dr. Kaczowski has used ADCIRC model to simulate hurricane storm-surge elevations for historic events. Wind field generated from PBL based on HURDAT storm database was used as an input in the model. Results were analyzed with EST to generate storm-surge level for different return periods.

**International Experience** – Dr. Kaczowski has served as project manager for multiple projects in China involving market assessment, marina and waterfront development feasibility studies, and marina preliminary design. Clients include US private investors, Middle East corporations, China government-owned company, and Spanish private investors.

#### **Professional Affiliations**

Registered Professional Engineer  
Certified PADI Scuba Diver  
Member - American Society of Civil Engineers  
Member - Association of Coastal Engineers