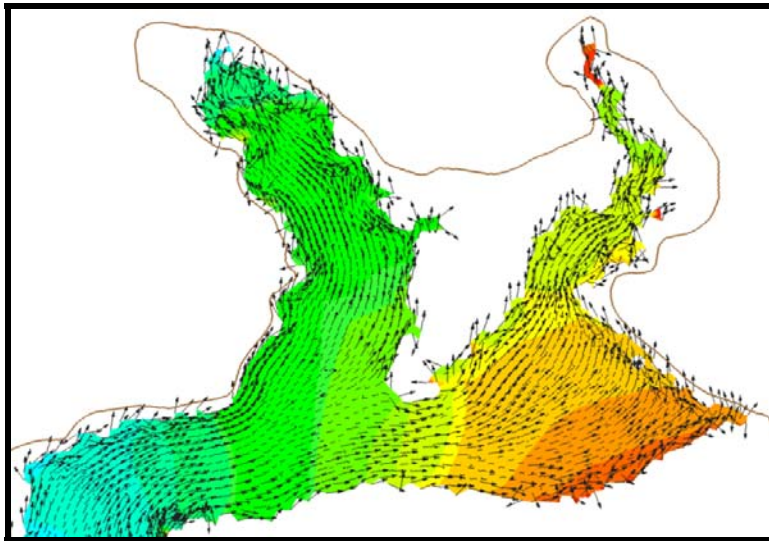


# Surface Water Modeling

Edited by Wenrui Huang & Ching-Jen Chen



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## PREFACE

The management and preservation of coastal environmental and water resources require a good understanding of the hydrodynamics and transport processes of these systems. Coastal water systems may include rivers, lakes, reservoirs, estuaries, and bays. Coastal watersheds are sources of pollutant and nutrient loadings to the coastal receiving waters. In recent years, numerical models have been popularly used as management tools by water resources professionals to support planning activities. Due to the complexity of the hydrodynamic and transport processes, researchers are continually developing new models, enhancing existing models, and applying models to address stratified flow in reservoirs and rivers, pollutant spills, surface and ground water interactions, wave-current interactions, storm surges, and near shore currents resulting from breaking waves.

This special issue of the Journal of Coastal Research collects twenty-six papers on surface water modeling. It covers six topics related to research and management in coastal zones: (1) rivers, (2) lakes and reservoirs, (3) watersheds, (4) estuaries, (5) coastal waves and storm surges, (6) and field data monitoring. This special issue can be used as a reference by graduate students, consultant engineers, research scientists, and water resource managers.

All manuscripts for the special issue have been peer-reviewed. Although some manuscripts were submitted by invitation, most of the manuscripts were selected and extensively revised from the papers for the 9th International Conference on Fluid Control, Measurements, and Visualization (FLUCOME), that was successfully held in Tallahassee, Florida during September 17-19, 2007. FLUCOME is a well established series of international conferences which began in Japan in 1985. The 9th FLUCOME provided a forum for researchers from multiple disciplines to exchange the latest information and technology on fluid processes across a wide range of topics, which include environmental hydrology, hydraulics, and experimental and computational fluid dynamics. The FLUCOME 2007 conference was co-sponsored by the American Society of Civil Engineers (ASCE), the American Water Resources Association (AWRA), and the International Association of Hydraulic Research (IAHR). The Guest Editors would like to thank Dr. Charles Finkl, Editor-in-Chief of the Journal of Coastal Research, for his support of the 9th FLUCOME conference, and the opportunity for us to edit this special issue on surface water modeling.

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