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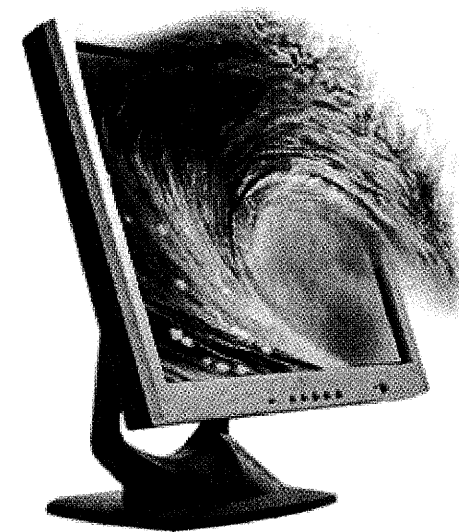
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 **CHAMPS Lab**

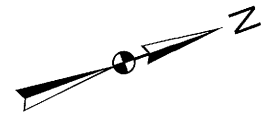
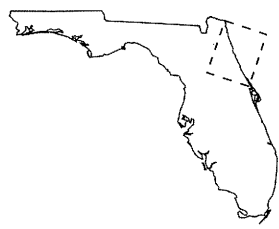
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**Coastal  
Hydroscience  
Analysis,  
Modeling &  
Predictive  
Simulations  
Laboratory**



# Our Mission

To educate and train tomorrow's engineers, scientists, and educators, while meeting the coastal hydroscience challenges of today.



St. Johns River

Our expertise in mesh generation enables us to develop and adjust our models quickly to include physical attributes (e.g., inundation areas and tidal marshes) that may influence estuarine hydrodynamics.

Lake George

Atlantic Intracoastal Waterway

Tidal Velocity Residuals for Lake George

This display of a triangular finite element mesh for the Lower St. Johns River region highlights our high-resolution approach to computer modeling of inflows, winds and barometric pressures, storm surge, astronomic tides, surface waves, or any combination thereof.

Initial model development is of a large scale to realize all forcing mechanisms (over the river, on the continental shelf, or from deep ocean waters) and ensures a description of as much physics as possible so as to enhance our understanding of coastal hydroscience.

