Highlight of Dr. Wenrui Huang's Research

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Hydrodynamic modeling analysis of critical flow in Little Manatee River, Florida

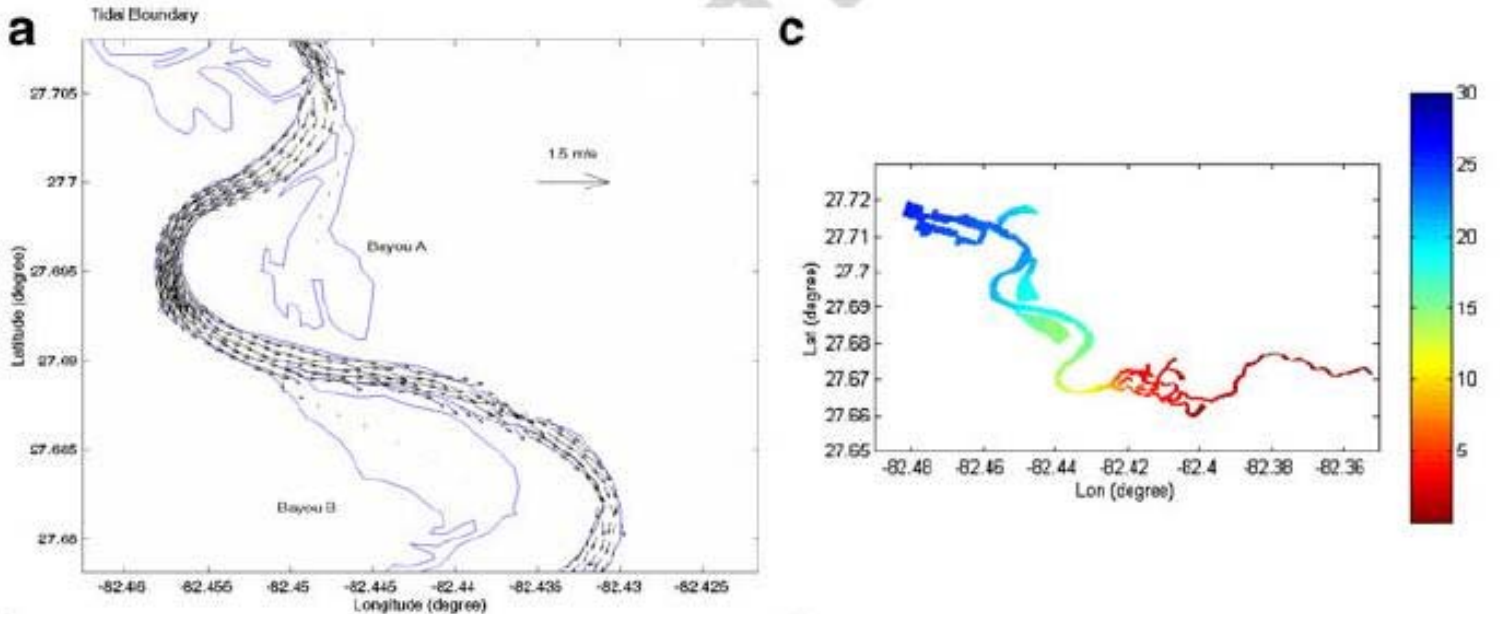
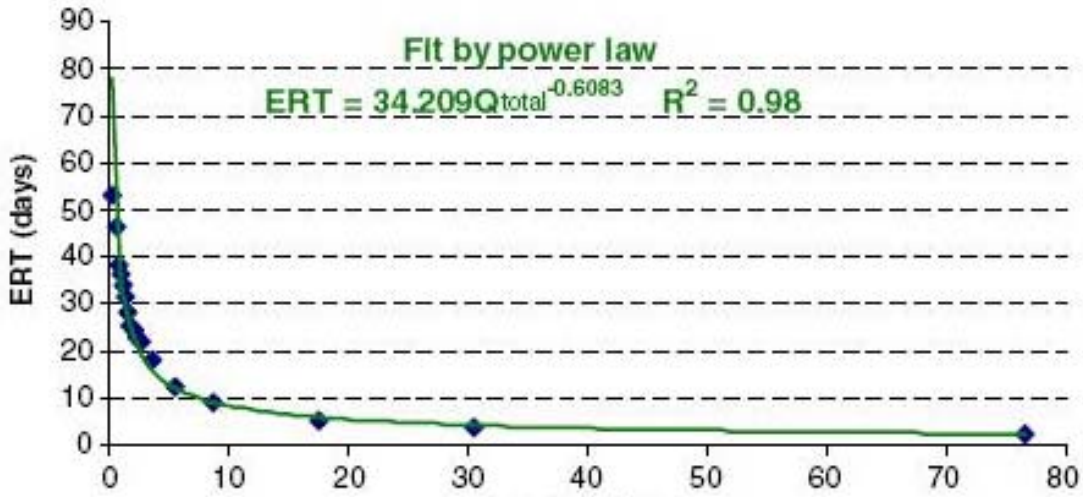


Fig. 9 Regression fit by power-law function between model predictions of ERT (days) and total freshwater inflow Q_{total} (m^3/s)



Modeling storm-induced sediment transport in Apalachicola Bay

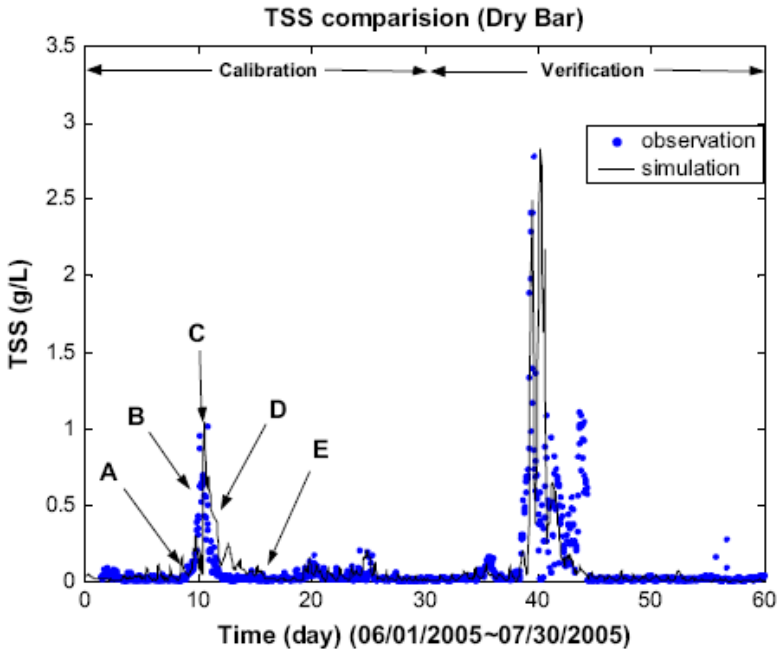


Fig. 10. Comparison of observation and simulation of TSS at Station Dry Bar. Snapshots of spatial distributions of TSS were taken at following time slots: (A) 12 a.m., June 8; (B) 6 a.m., June 10; (C) 12 p.m., June 10; (D) 12 a.m., June 11; (E) 12 a.m., June 15.

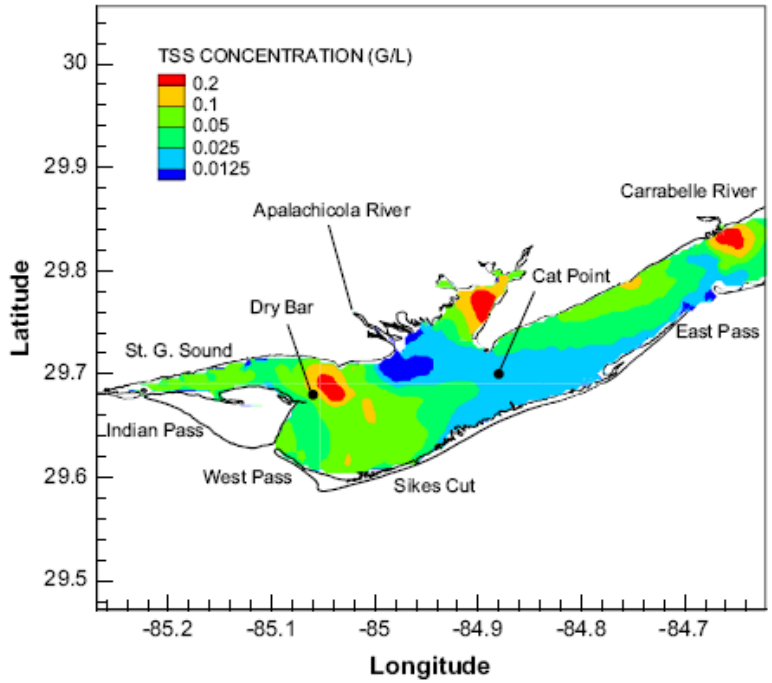
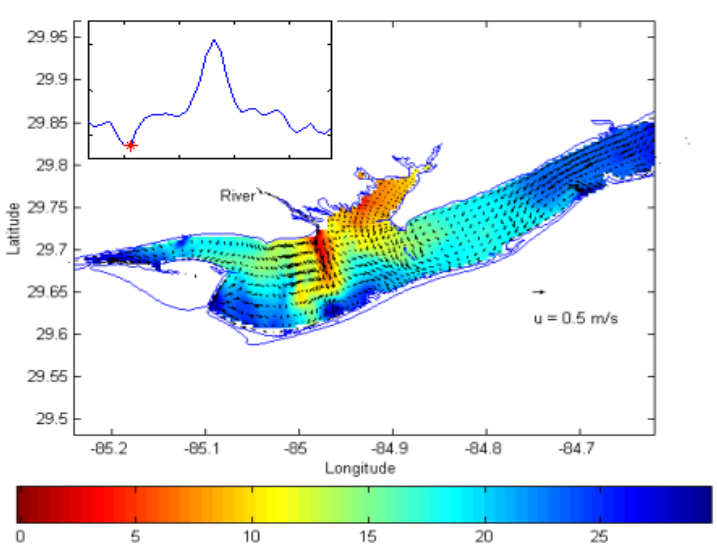
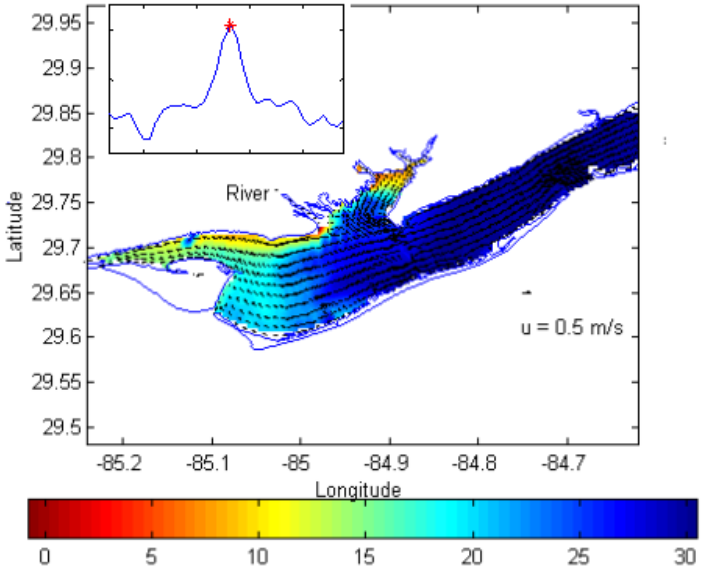


Fig. 11. Pre-storm condition at time slot (A): model predicted spatial distributions of TSS concentration at 12 a.m., June 8. Wind speed = 0.5 m/s.

Modeling effects of storm surge on salinity in Apalachicola Bay





Hydrological modeling of typhoon-induced extreme storm runoff in Shimen watershed, Taiwan

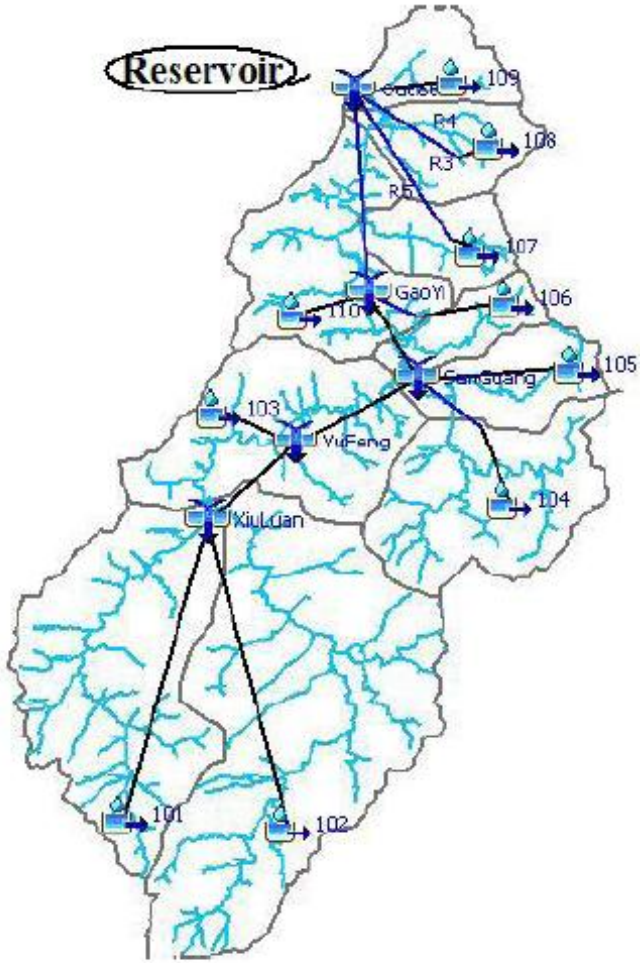
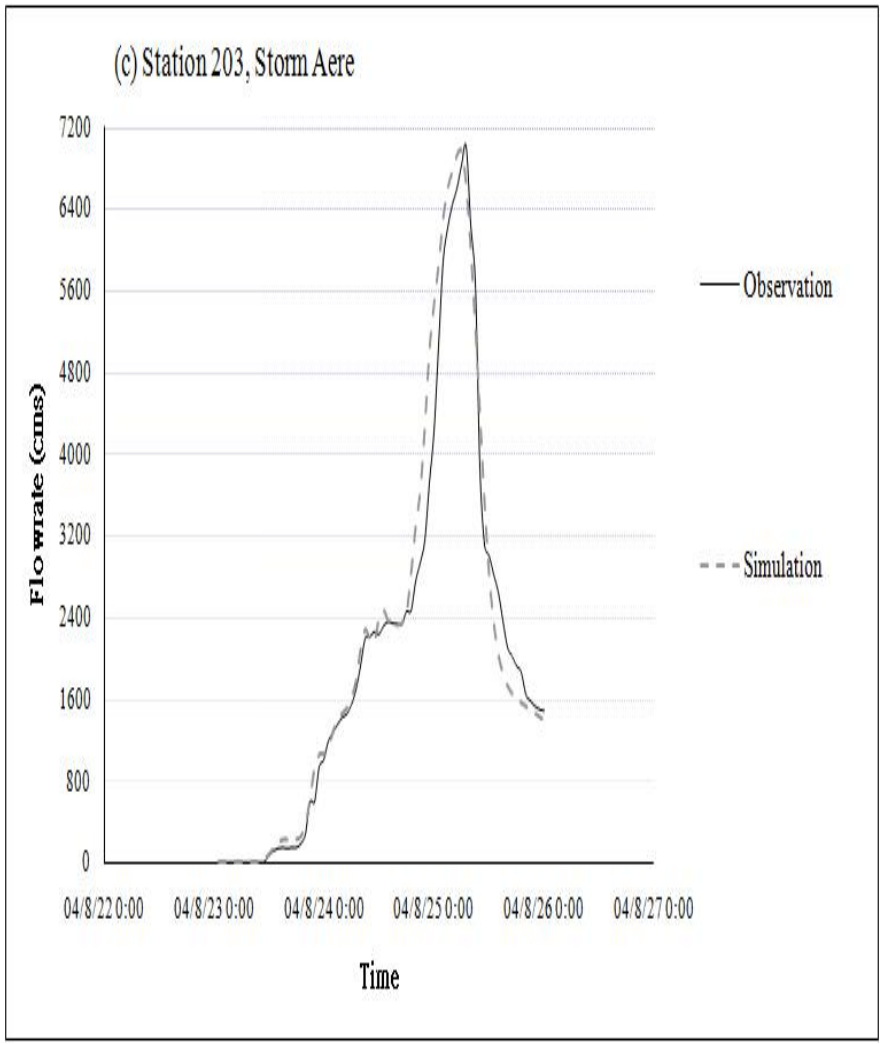
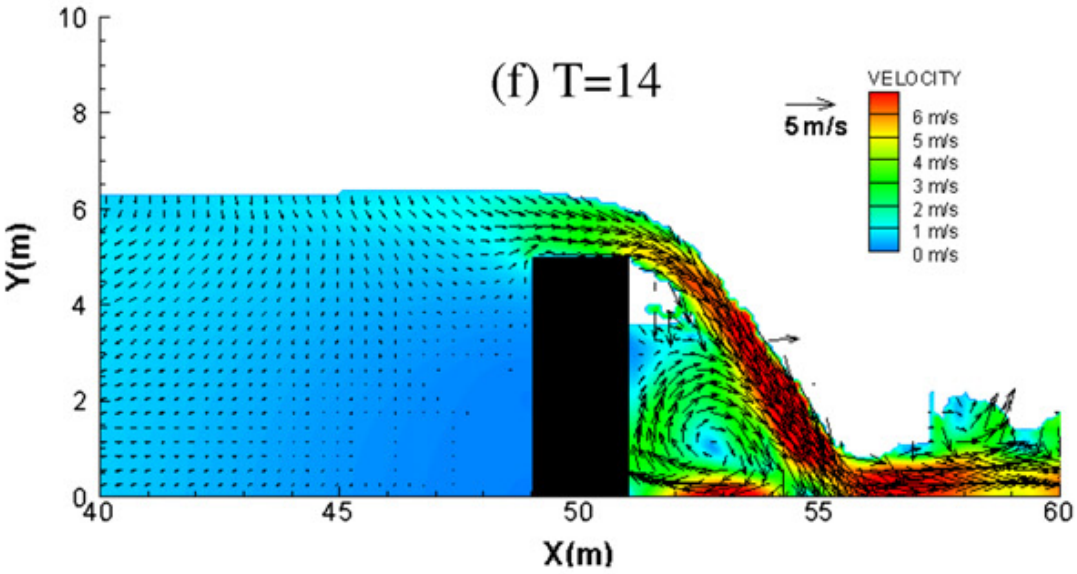


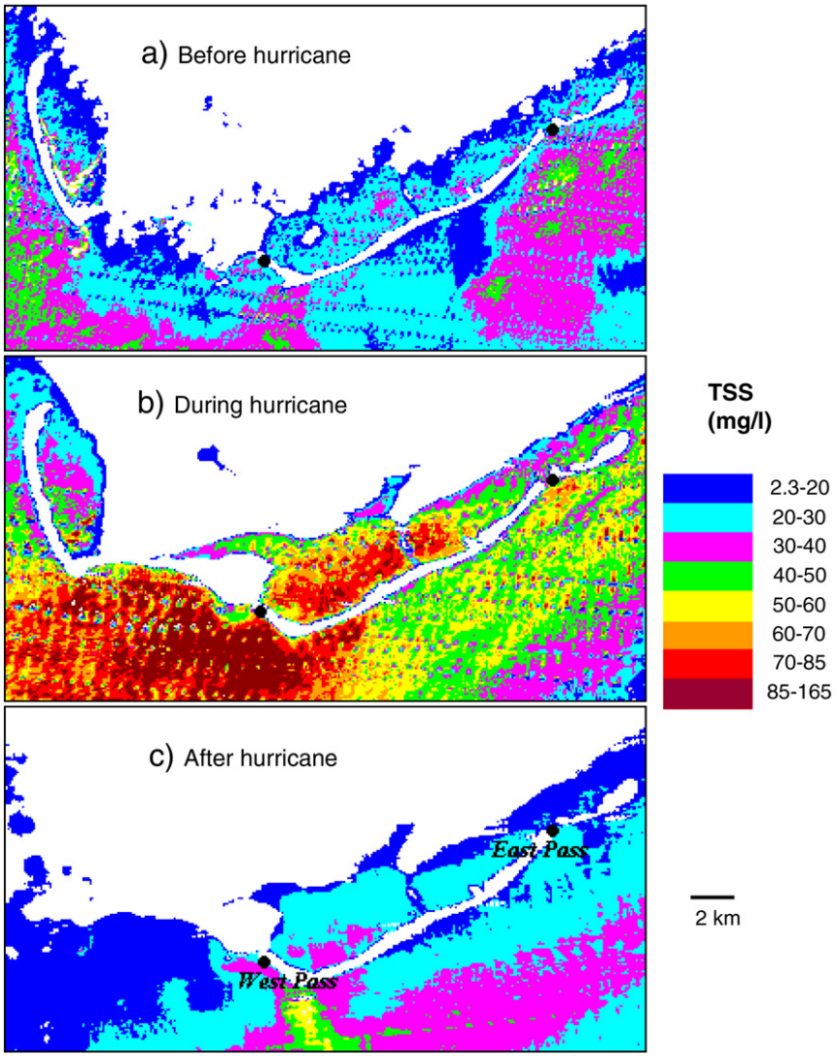
Fig. 4-9 Subbasins in HEC-HMS



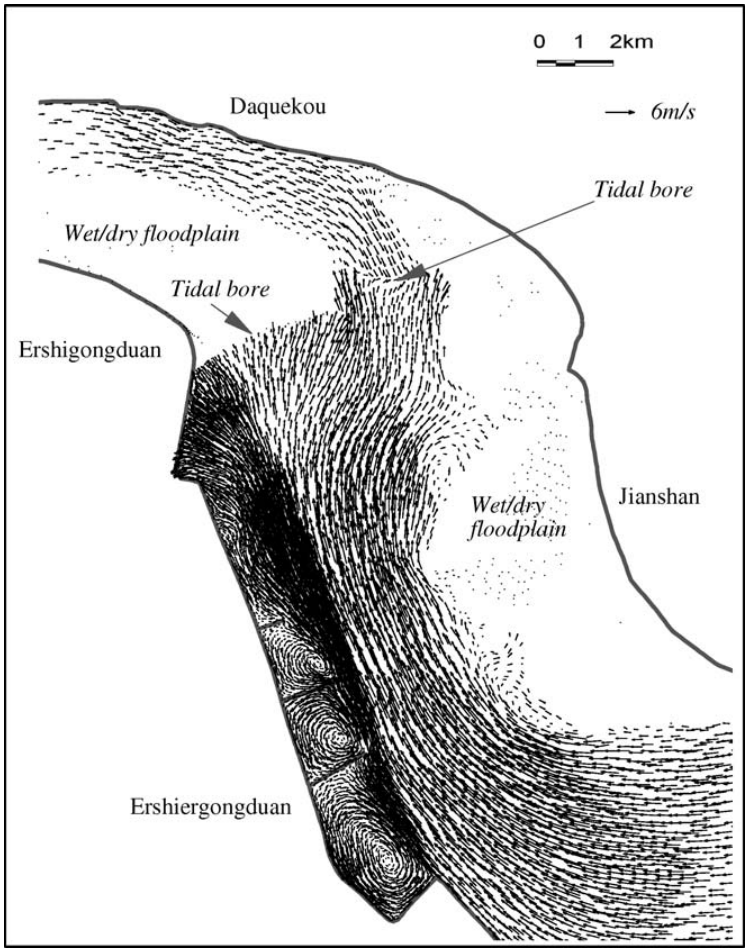
Computational modeling of wave overtop on seawall



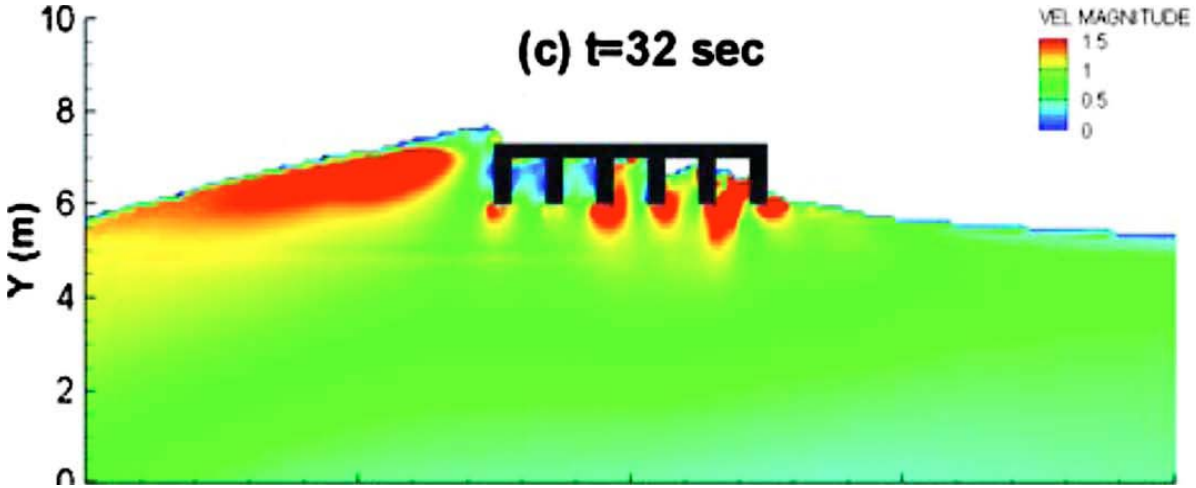
Remote sensing analysis of hurricane impact on suspended sediment in Apalachicola Bay



Hydrodynamic and sediment transport modeling tidal bore in Qiantang River



Hydrodynamic modeling of wave forces acting on bridge deck in Pensacola Bay during Hurricane Ivan



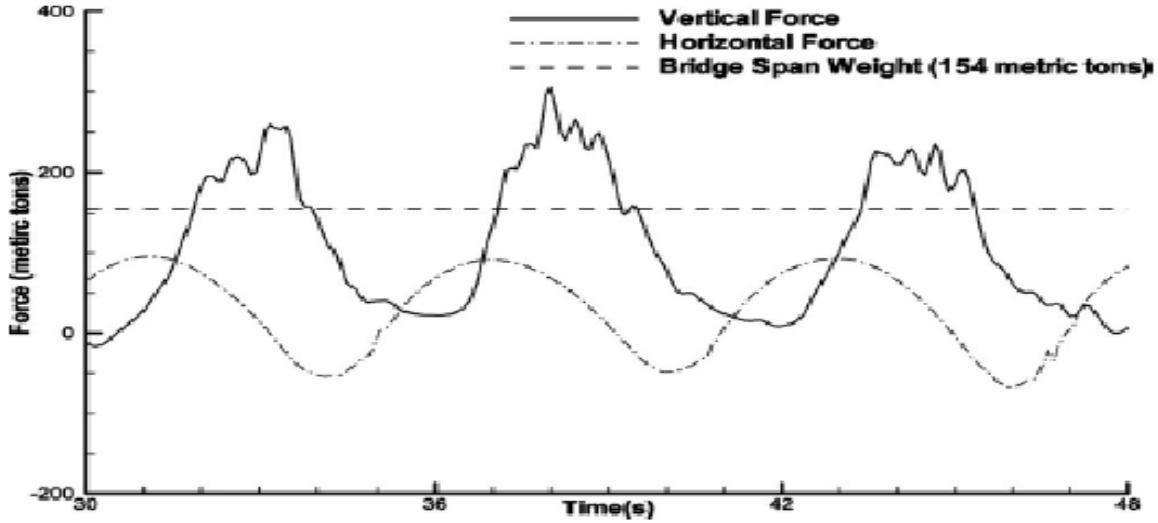
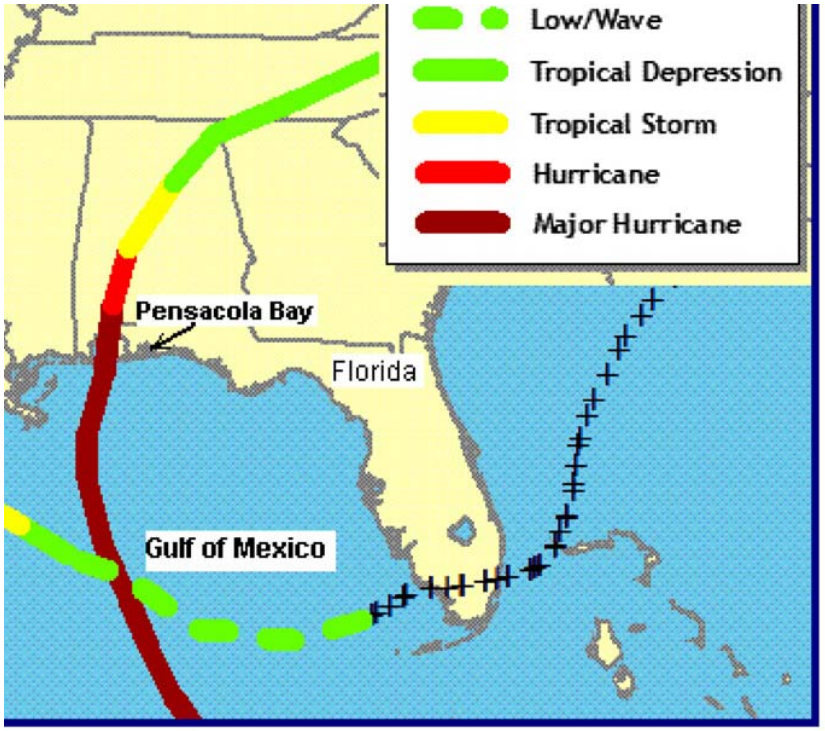
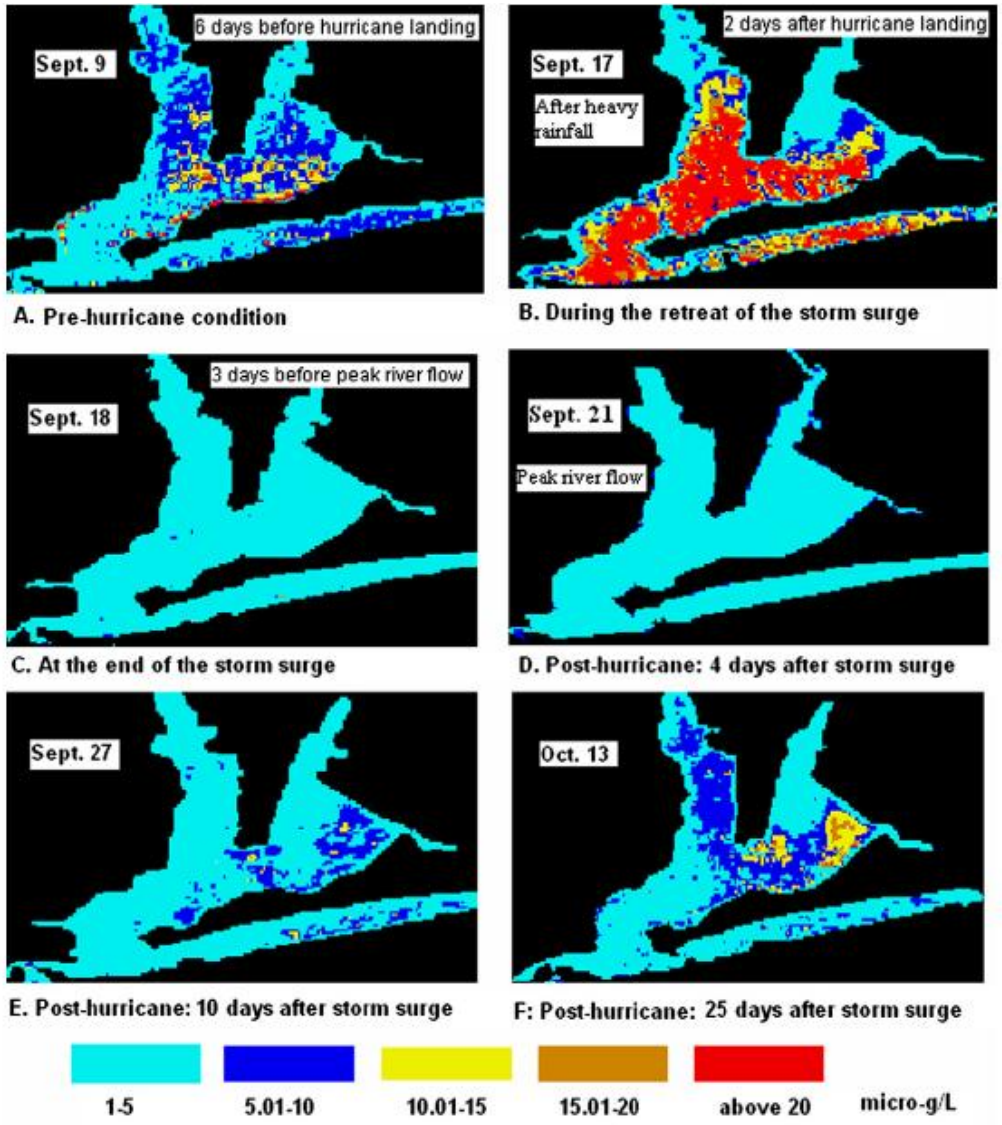


Fig. 14. Forces on bridge deck (per span) (deck location = 1/4 H below surge water elevation)

Remote sensing analysis of Hurricane Ivan's Impacts on Chlorophyll-a in Pensacola Bay



(a) Track of Hurricane Ivan



A. Pre-hurricane condition

B. During the retreat of the storm surge

C. At the end of the storm surge

D. Post-hurricane: 4 days after storm surge

E. Post-hurricane: 10 days after storm surge

F: Post-hurricane: 25 days after storm surge

Hydrodynamic modeling for estimating 100-year flood map in Pensacola Bay