



# Center for Scientific Computation And Mathematical Modeling

University of Maryland, College Park

## Workshop Announcement

# Modeling and Computations of Shallow-Water Coastal Flows

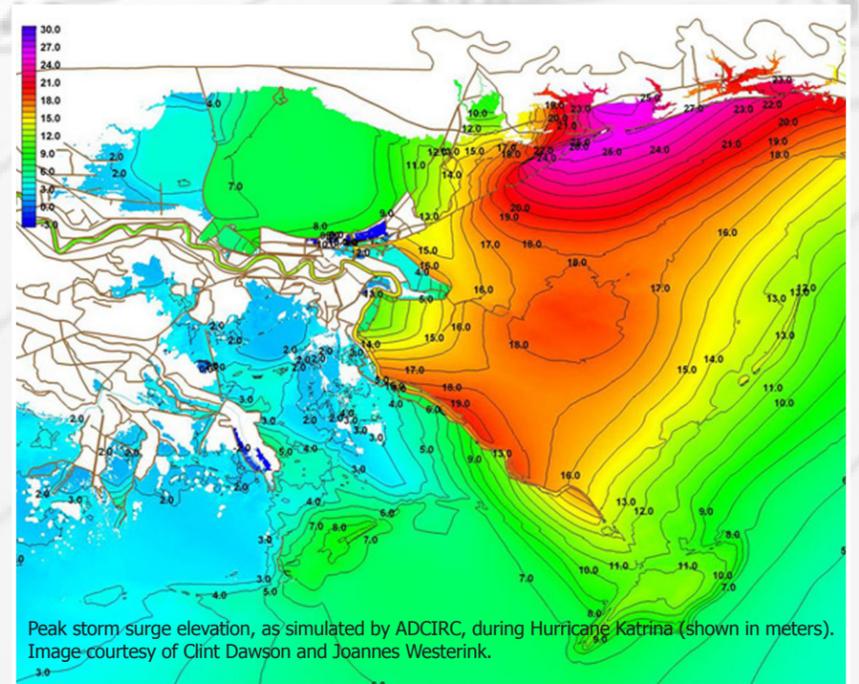
October 18-22, 2010

### Organizers

<b>Frank Giraldo</b>	Naval Postgraduate School
<b>Kayo Ide</b>	University of Maryland
<b>Randall LeVeque</b>	University of Washington
<b>Eitan Tadmor</b>	University of Maryland

### Confirmed Participants

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<b>Jörn Behrens</b>	University of Hamburg
<b>Eric Blayo</b>	Université Joseph Fourier, Grenoble
<b>Roberto Camassa</b>	University of North Carolina at Chapel Hill
<b>Manuel Castro-Díaz</b>	University of Málaga
<b>Clint Dawson</b>	The University of Texas at Austin
<b>Anne Gelb</b>	Office of Naval Research
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<b>Kyle Mandli</b>	University of Washington
<b>Siddhartha Mishra</b>	ETH Zurich
<b>Antonio Navarra</b>	Centro Euro-Mediterraneo per i Cambiamenti Climatici
<b>Don Resio</b>	Coastal and Hydraulics Laboratory
<b>Wilson Shaffer</b>	NOAA
<b>Eitan Tadmor</b>	University of Maryland
<b>Joannes Westerink</b>	University of Notre Dame
<b>Kraig Winters</b>	University of California, San Diego



Peak storm-surge elevation, as simulated by ADCIRC, during Hurricane Katrina (shown in meters). Image courtesy of Clint Dawson and Joannes Westerink.

### Scientific Background

The shallow water (SW) equations play a critical role in modeling and simulation of coastal flows, capturing fundamental phenomena across different length and time scales. As an example we mention storm surges (due to hurricanes, typhoons) that inundate coastal regions, resulting in large scale destruction and loss of life. For geographical scales of interest it is generally necessary to model these flows using two-dimensional models such as the shallow water equations, rather than full three-dimensional fluid dynamics. Of particular interest are recent developments of modern algorithms which are specifically tailored for the one- and multi-layer shallow-equations. We intend to examine the ongoing research on shallow water equations; to identify promising avenues of further study; and to formulate a number of problems that are at once tractable and have potential to provide further insight into the nature of coastal flows.

**A limited number of openings are available.**

To apply, complete the application before **August 2, 2010** at:

[www.cscamm.umd.edu/programs/swe10/rsvp.htm](http://www.cscamm.umd.edu/programs/swe10/rsvp.htm)

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