Biographical Sketch

Harry Ven-Chieh Wang

Virginia Institute of Marine Science
Department of Physical Sciences
College of William and Mary
Gloucester Point, VA 23062

Ph: (804)-684-7215
fax:(804)-684-7899
email: hvwang@vims.edu

Education

B.S. Atmospheric Sciences; National Taiwan University, 1975
Ph.D. Geophysical Fluid Dynamics, The Johns Hopkins University, 1983

Professional Experiences

1998 - present, Professor, Virginia Institute of Marine Science
1992 - 1998, Research Physical Scientist, US Army Corps of Engineers, WES
1985 - 1992, Water Resource Engineer, Maryland Department of the Environment
1983 - 1985, Research Associate, Chesapeake Bay Institute/Applied Physics Laboratory, The Johns Hopkins University

Harry Wang has an extensive experience on applying numerical model technique in the estuarine and coastal environments for nation-wide projects:
- The Indian River and Rehoboth Bay hydrodynamic and water quality model study
- Los Angeles Harbor hydrodynamic modeling in supporting of water quality and ship simulation
- The San Diego Bay numerical model study
- Chesapeake Bay hydrodynamic and water quality model study

Research Interests:

My long-term research interests are the estuarine and coastal physical processes and their consequence on the transport properties. Specifically, the transports driven by wind, wave, tide, density and affected by the Coriolis force and turbulent mixing. My recent works emphasize on the use of numerical computational methods to simulate the current, water level, salinity, temperature and the associated environmental conditions such as water quality, sediment, toxic concentration, and larval transport.

Selected Relevant Publications

1. Harry V. Wang, Jie Gao, David Forrest (2010): "The storm surge and inundation modeling for Veteran's Day Winter Storm, 2009 in the Chesapeake Bay" *Ocean dynamics* (submitted)
2. Hong, Bo, Nauth Panday, Jian Shen, H. V. Wang and Wenping Gong (2009): "A modeling study of water exchange between Baltimore Harbor and Chesapeake Bay using tracer simulations". (accepted for publication, *Marine Environmental Research*)
3. Gong Wenping, Jian Shen, Kyoung-Ho Cho and Harry V. Wang (2009):"A numerical model study of barotropic subtidal water exchange between estuary and subestuaries in the Chesapeake Bay during northeaster events" *Ocean Modelling*, , Vol. 26, p170-189. .
4. Wang, Chi-Fang, Harry. V. Wang, and A. Y. Kuo (2008): "Development of a mass conservation

scheme for scalar transport in ELCIRC model – a step toward water quality computation" *Journal of Hydraulic Engineering* Vol. 134, No. 8, pp1166-1171.
5. Lipcius, Romuald, D. B. Eggleston, J. S. Sebastian, R. Seitz, J. Shen , M. Sisson and H.V. Wang (2008): "Importance of metapopulation connectivity to restocking and restoration of marine species" *Review in Fishery Science*, Vol. 16: p101-110.
6. Park, Kyeong, H. V. Wang and S. Kim (2008): "A model study of the estuarine turbidity maximum along the main channel of the Upper Chesapeake Bay" *Estuaries and Coasts*. 31:115–133
7. Shen J. and H. V. Wang (2007): "Determining the age of water and long-term transport timescale of the Chesapeake Bay". *Estuarine Coastal and Shelf Science*, 68 (1-2), 1-16
8. Shen, J, H. V. Wang, M. Sisson, W. Gong (2006). "Storm tide simulation in the Chesapeake Bay using an unstructured grid model". *Estuarine, Coastal and Shelf Science*, 68 (1-2), 1-16
9. Shen, J., Gong, W., Wang, H. V. (2006). "Water level response to 1999 hurricane Floyd in the Chesapeake Bay". Continental Self Research, 26, 2484-2502
10. Wang, H. V, Joe Cho, Jian Shen, and Ya Ping Wang (2005): "What Has been learned about storm surge dynamics from Hurricane Isabel model simulations?" Hurricane Isabel *in Perspective Conference, Baltimore, MD., Proceeding of a Conference, Chesapeake Bay Consortium, pp117-125.*
11. Lin, Jing., H. V. Wang, J-H Oh, K. Park, S-C Kim, J. Shen and A. Kuo, (2003):" A New Approach to Model Sediment Resuspension in Tidal Estuaries." *Journal of Coastal Research, Vol. 19, No. 1, p76-88.*
12. Brown, C. W., R. R. Hood, Z. Li, M. B. Decker, T. F. Gross, J. E. Purcell and H. V. Wang, (2002):"Forecasting System predicts Presence of Sea Nettles in Chesapeake Bay." *EOS, Transactions, American Geophysical Union, Vol. 83, No.30. p321-326.*
13. Xu, Jiangtao, Shenn-yu Chao, Raleigh R. Hood, Harry Wang, W. C. Boicourt (2002): Assimilating high-resolution salinity data into a model of a partially mixed estuary. J. *Geophys. Res. Vol. 107, No. C7, p 11-1 11-14.*
14. Wang, Harry V. and Billy H. Johnson (2001): Validation and application of the second generation three-dimensional hydrodynamic model of Chesapeake Bay, *Water Quality and Ecosystem Modeling, Vol 1, pp51-90.*
15. Raleigh R. Hood, H. V. Wang, Jennifer Purcell, Edward Houde, Lawrence Harding Jr. (1999): Modeling Particles and Pelagic Organisms in Chesapeake: Convergence Features Control Plankton Distributions. *Journal of Geophysical Research, Vol. 104, 1223-1243.*
16. Wang, H. and Michael Amei, (1998): "Modeling Flow Through Multiple Inlets and Over Barrier Beaches" *Journal of Coastal Research, special issue number 26, pp.173-180.*
17. Wang, H., S. Chao (1996): Intensification of Subtidal Surface Currents over a Deep Channel in the Upper Chesapeake Bay. *Estuarine, Coastal and Shelf Science, Vol 42. pp1-15.*
17. Chao, S, W. Boicourt and H. Wang (1996): Three-Layered Circulation in Reverse Estuaries. *Continental Shelf Research, Vol. 16, No.10, pp1379-1397.*

Synergistic Activities: A member of EPA Chesapeake Bay Program modeling sub-committee; A members of SURA Consortium, SCOOP program currently engaging in super-regional test bed project.

Collaborators and Other Affiliations

Collaborators and Co-editors: John Billet, Shenn-Yu Chao, Raleigh Hood, Billy H. Johnson, John Klinck, Michael Koterba, Jay Titlow, Leonidas Linardakis. Graduate Student: Ph.D. Yi-Cheng Teng; Derek Loftis; Master students: Jie Gao. Thesis Advisor: Yuepeng Li (Florida International University), Joe Cho (Oregon Graduate Institute), Taiping Wang (Pacific Northwest National Lab.), Tao Shen (DHI). Total student advised:6, and postdoctoral scholars sponsored:5.