

## BRIAN O. BLANTON

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Senior Scientist/Oceanographer  
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### PROFESSIONAL PREPARATION

Armstrong State College	Mathematical Sciences	B.S. (1991)
University of North Carolina at Chapel Hill	Marine Sciences	Ph.D. (2003)
University of North Carolina at Chapel Hill	Marine Sciences	Post-Doc (2004)

### APPOINTMENTS

Senior Scientist, Renaissance Computing Institute, University of North Carolina at Chapel Hill (06/2007 – present)  
Oceanographer, Science Applications International Corporation (05/2006 – 05/2007)  
Research Assistant Professor, Department of Marine Sciences, University of North Carolina at Chapel Hill (01/2005-05/2006)

### FIVE CLOSELY RELATED PRODUCTS

Savidge, D., J. Austin and B. Blanton, Variation in the Hatteras front density and velocity structure, Part 1: High Resolution Transects from three seasons in 2004-2005. *Cont. Shelf Res.*, Accepted, November 2012.

Blanton, B., McGee, J., Fleming, J., Kaiser, C., Kaiser, H., Lander, H., Luettich, R., Dresback, K., and Kolar, R. Urgent computing of storm surge for North Carolina's coast. *Procedia Computer Science*, 9(0):1677–1686. Proceedings of the International Conference on Computational Science, ICCS 2012, 2012.

Apivatanagul, P., R. Davidson, B. Blanton, and L. Nozick, Long-term regional hurricane hazard analysis for wind and storm surge, *Coastal Engineering*, 58(6), 499 – 509, 2011.

Atkinson, J., T. Wamsley, J. Westerink, M. Cialone, C. Dietrich, K. Dresback, R. Kolar, D. Resio, C. Bender, B. Blanton, S. Bunya, W. de Jong, B. Ebersole, A. Grzegorzewski, B. Jensen, H. Pourtaheri, J. Ratcliff, H. Roberts, J. Smith, and C. Szpilka, Hurricane storm surge and wave modeling in southern Louisiana: A brief overview, *Estuarine and Coastal Modeling, ASCE*, pp. 467-506, doi:10.1061/40990(324)28, 2008.

Blanton, B., F. Werner, H. Seim, R. Luettich, D. Lynch, K. Smith, G. Voulgaris, F. Bingham, and F. Way, Barotropic tides in the South Atlantic Bight, *J. Geophys. Res.*, 109, C12024, 3264, doi:10.1029/2004JC002455, 2004.

### FIVE OTHER PRODUCTS

Aretxabaleta, A., B. Blanton, H. Seim, F. Werner, J. Nelson, E. Chassignet, Cold event in the South Atlantic Bight during summer of 2003: Model simulations and implications, *J. Geophys. Res.*, 112, C05022, 3264, doi:10.1029/2006JC003903, 2007.

Edwards, K., J. Hare, F. Werner, and B. Blanton, Lagrangian circulation on the Southeast US Continental Shelf: Implications for larval dispersal and retention. *Cont. Shelf Res.*, 26, 1375-1394, 2006.

Edwards, K., F. Werner, and B. Blanton, Comparison of Observed and Modeled Drifter Trajectories in Coastal Regions: An Improvement through adjustments for observed drifter slip and errors in wind fields, *J. Ocean. Atmos. Tech.*, 23(11), pp. 1614-1620, 2006.

Lynch, D., K. Smith, B. Blanton, F. Werner and R. Luettich, Forecasting the coastal ocean: Resolution, tide and operational data in the South Atlantic Bight, *J. Ocean. Atmos. Tech.*, 21(7), pp. 1074-1085, 2004.

Blanton, B., A. Aretxabaleta, F. Werner, and H. Seim, Monthly climatology of the continental shelf waters of the South Atlantic Bight, *J. Geophys. Res.*, 108(C8), 3264, doi:10.1029/2002JC001609, 2003.

## **SYNERGISTIC ACTIVITIES**

- **North Carolina Sea Level Rise Risk Management Study:** An extension of the North Carolina coastal flood insurance study, this project is calculating the storm surge risks under increasing sea level stands. FEMA-funded, it uses the same techniques as in the flood insurance study, recomputing the statistical flood levels for up to 1 meter of sea level increase.
- **Coastal Flood Hazard Analysis:** Lead investigator at UNC-Chapel Hill for FEMA-funded coastal flood insurance studies in North Carolina (part of FEMA's Region 4) and FEMA Region 3 (Chesapeake and Delaware Bays). Developed state-of-the-art numerical model systems for storm surge and wind waves, and statistical analyses for computing statistical flood hazards for use in FEMA flood insurance rate maps. Both project teams include academic, federal, state, and industry participants.
- **Louisiana Coastal Protection and Restoration/US Army of Corps of Engineers:** Member of expert team applying advanced numerical models for storm surge and wind waves for the US Army Corps of Engineers' Louisiana Coastal Protection and Restoration (LACPR) project, a federally directed effort to investigate a full range of flood control and hurricane protection strategies for the New Orleans and surrounding coastal Louisiana region. Developed a simulation management strategy and software to compute coastal storm surge for hundreds of hypothetical hurricanes in a consistent software on high-performance supercomputers.
- **Interagency Performance Evaluation Task Force (IPET):** Provided expertise for use of flood hazard statistics storm surge modeling system in the IPET risk-based decision-making model. This included evaluation of the risk model performance and skill assessment. Led to the Department of the Army, Commander's Award for Public Service, August 2007, given for commitment to the US Army Corps of Engineers IPET Engineering and Operational Risk and Reliability Analysis project, investigating inherent risk of the Louisiana Hurricane Protection system.

## **RECENT COLLABORATORS:**

Tom Allen (East Carolina University), John Atkinson (Arcadis, Inc), Larry Atkinson (Old Dominion University), Jay Austin (U Minnesota-Duluth), Vince Cardone (Ocean Weather Inc), Tom Crawford (East Carolina University), Rachel Davidson (University of Delaware), John Dorman (North Carolina Emergency Management), Bruce Ebersole (US Army Corps of Engineers), Jesse Feyen (NOAA), Jeffery Hanson (US Army Corps of Engineers), Ruoying He (NC State University), David Levinson (USDA), Richard Luettich (UNC-Chapel Hill), John McGee (UNC-Chapel Hill), Linda Nozick (Cornell), Margery Overton (NC State University), Hugh Roberts (Arcadis, Inc), Dana Savidge (Skidaway Institute of Oceanography), Harvey Seim (UNC-Chapel Hill), Gavin Smith (UNC-Chapel Hill), Peter Vickery (Applied Research Associates), Joannes Westerink (Univ. Notre Dame), Don Wright (SURA)

## **GRADUATE AND POSTDOCTORAL ADVISORS:**

Francisco E. Werner (currently Director, NOAA Southwest Marine Fisheries Science Center, La Jolla, CA), Ph.D. and Postdoctoral advisor.

## **STUDENT COMMITTEES:**

Karen Edwards, UNC-Chapel Hill, Marine Sciences, Ph.D., 2006.  
Catherine Edwards, UNC-Chapel Hill, Marine Sciences, Ph.D., 2008.  
Onur Kurum, NC State University, Civil Engineering, Ph.D., in progress.  
Jesse Bikman, UNC-Chapel Hill, Marine Sciences, M.S., in progress.