

RICHARD A. LUETTICH, JR.

**Professor of Marine Sciences and Environmental Sciences and Engineering
Director, UNC Institute of Marine Sciences
Director, UNC Center for Natural Hazards Resilience**

ADDRESS:

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100 Europa Drive, Suite 540
Chapel Hill, NC 27517

EDUCATION:

1987 Sc.D. Civil Engineering, Massachusetts Institute of Technology.
1981 M.S. Civil Engineering, Georgia Institute of Technology.
1979 B.C.E. Civil Engineering, with Highest Honors, Georgia Institute of Technology.

PROFESSIONAL EXPERIENCE:

2010 - 2013 Sewell Family Term Professor of Marine Sciences
2008 – pres *Director*, Center for the Study of Natural Hazards and Disasters, UNC Chapel Hill
2007 – pres Chief Domain Scientist, Coastal Modeling, Renaissance Computing Institute
2004 - pres *Director*, Institute of Marine Sciences, UNC Chapel Hill
1999 - pres. Professor of Marine Sciences and Environmental Sciences and Engineering,
University of North Carolina at Chapel Hill.
1997 - 1999 Associate Professor of Marine Sciences and Env. Sciences & Eng., UNC Chapel Hill.
1993 - 1997 Associate Professor of Marine Sciences, UNC Chapel Hill.
1987 - 1993 Assistant Professor of Marine Sciences, UNC Chapel Hill.
1981 - 1987 RA/TA, Dept. of Civil Eng., Massachusetts Institute of Technology.
1980 - 1981 Hydrologist, US Geological Survey, Regional Office, Atlanta, Ga.
1979 - 1980 RA, Dept. of Civil Eng., Georgia Institute of Technology.

PROFESSIONAL INTERESTS AND ACTIVITIES:

My research has dealt with several facets of modeling and measurement of circulation and transport in coastal waters. My modeling efforts have emphasized the development and application of techniques that are optimized for geometrically complex systems such as sounds, estuaries, inlets and inundated regions and for high performance computing. I am one of the principal developers and I distribute the release version of the ADCIRC circulation and storm surge model that is widely used by the academic, government and private sectors and has become a cornerstone of coastal hazards / storm surge studies over the last decade. For example, ADCIRC was used / is being used by the US Army Corps of Engineers to design the \$14.5 billion Hurricane and Storm Damage Risk Reduction System for greater New Orleans, by FEMA to replace outdated National Flood Insurance hazard maps along the US coast from New York to Texas, by the Nuclear Regulatory Commission to evaluate the vulnerability of coastal nuclear power plants to flooding and by NOAA and other groups for storm surge forecasting along the US coasts. I have been directly involved in a number of these applications. In addition to coastal hazards modeling, I've conducted interdisciplinary modeling studies in physically mediated migration, larval dispersal and water quality. I am an active leader in the coastal natural hazards and coastal modeling communities, leading the Dept of Homeland Security's Coastal Hazards Center of Excellence and the recently awarded Coastal Resilience Center of Excellence, initiating the Center for the Study of Natural Hazards and Disasters to promote multidisciplinary hazards research at UNC and leading the multi-institutional, Coastal Ocean Modeling Testbed for the US Integrated Ocean Observing System program to

facilitate the transition of advancements in coastal modeling from research to operations. In parallel with my modeling activities, my observational activities have focused on process based studies in coastal waters, often to understand the role of physics in areas of water quality (e.g., phytoplankton blooms, dissolved oxygen depletion) and fisheries recruitment. I have developed and have a provisional patent on an autonomous vertical profiling system that has provided novel data on high frequency anoxic water upwelling, diel vertical plankton migration, sediment resuspension and wind driven mixing in shallow NC sounds. I have also actively participated on numerous coastal science advisory committees including three National Academies/National Research Council committees (most recently as chair of the Coastal Risk Reduction committee), the Advisory Board for the Oxford Research Encyclopedia of Natural Hazard Science, the Southeast Louisiana Flood Protection Authority-East, the Science and Engineering Advisory Council for the Water Institute of the Gulf and as the Guest Editor of a special issue on coastal hazards related to storm surge for the Journal of Marine Sciences and Engineering. I also served two terms as a publically elected member of the Carteret County Board of Education.

ACTIVITIES AND HONORS:

- 2015 UNC Provost's Task Force on the Environment
- 2014 – pres., Advisory Board, Oxford Research Encyclopedia of Natural Hazard Science
- 2014 – 15, Guest Editor, Special Issue: Coastal Hazards Related to Storm Surge, Journal of Marine Science and Engineering
- 2013 – 14, National Academy of Engineering/National Research Council committee on Coastal Risk Reduction (Chair).
- 2013** – International Data Corporation, High Performance Computing Innovation Excellence **Award**
- 2012** – Dept. Homeland Security Science and Technology Impact **Award**
- 2012 – 13, Chesapeake Bay Program Modeling Laboratory Action Team
- 2012 – pres., The Water Institute of the Gulf, Scientific and Engineering Advisory Council
- 2012 – pres., Southeast Louisiana Flood Protection Authority – East
- 2012 – 14, Northern Gulf Coastal Hazards Collaboratory Advisory Board
- 2011, 13 – Georgia Sea Grant review panel
- 2010** –Dept. Homeland Security Science and Technology Impact **Award**
- 2009 – 2014, Centers for Ocean Science Education Excellence (COSEE) Advisory Board
- 2009 Florida Sea Grant review panel
- 2009 College of William and Mary, High Performance Computing Program Review, co-chair
- 2009 NSF, Track 2 High Performance Computing Review Panel
- 2008 - 2011, SECOORA Science Advisory Committee
- 2007 – 2009, National Academy of Engineering/National Research Council committee on Louisiana Coastal Area Protection and Restoration Program
- 2007 – pres, Member American Meteorological Society, (Committee on Coastal Environment, 2006-08)
- 2006 – 2008, Ocean.US, IOOS Modeling and Analysis Steering Team
- 2006 NSF, Cyber Infrastructure Review Panel
- 2006 AGU Panel of Experts on Hurricane Science
- 2006 - 2009, National Academy of Engineering/National Research Council committee on New Orleans Regional Hurricane Protection Projects – led briefing of final report to Sec of Army and his staff, staff from two Congressional sub-Committees
- 2005 Army COE Inst Water Resources, Working Group on science for post-Katrina/Rita planning for greater New Orleans and Coastal Louisiana
- 2004 NC Water Resources Research Technical Review Panel
- 2003 Naval Research Laboratory, External Review Panel
- 2003 NSF, Information Technology Research Review Panel
- 2002 - 2008, Elected member of the Carteret County Board of Education
- 2001 - 2009, Member Estuarine Research Federation
- 2000 NSF, Physical Oceanography Review Panel

1997 - 2000, N.C. Scientific Advisory Council on Water Resources and Coastal Fisheries Management.
 1995 NOAA, Mid Atlantic Bight National Under Sea Research Program Review Panel.
 1992 - 2000, Affiliate Scientist., Center Coastal & Land-Margin Res., Oregon Graduate Institute.
 1992 - pres., Adjunct faculty member, Dept. of Civil Engineering, North Carolina State University.
 1992 - 1999, Editorial Board, Journal of Marine Environmental Engineering.
 1992 Visiting Scientist, Proudman Oceanographic Laboratory, UK.
 1991 DOE, Ocean Margins Program, Physical Oceanography Review Panel.
 1987 - pres., Member Amer. Geophys. Union, candidate for Sec. of Phys. Ocean. Section, 1997&1999.
 1982 Georgia Tech Sigma Xi award for outstanding M.S. Thesis in Engineering.
 1980 Who's Who in American Colleges and Universities.
 1979 B.C.E. degree with highest honors.
 1975 Graduated 3rd in class of 330 from Cony High School, Augusta, Maine. Selected as the outstanding male in graduating class.

Reviewer for The American Naturalist, Advances in Water Resources, Continental Shelf Research, Ecologia, Env. Fluid Mechanics, Env. Science & Technology, EOS, Estuaries, Estuarine and Continental Shelf Sciences, Int. J. Numerical Methods in Fluids, J. Atmospheric & Oceanic Technology, J. of the Eliza Mitchell Society, J. Geophysical Research, J. Hydraulic Engineering, J. Marine Science and Engineering, J. Marine Systems, J. Physical Oceanography, J. Waterway, Port, Coastal & Ocean Engineering, Limnology & Oceanography, Marine Geology, Marine Ecology Progress Series, Ocean Dynamics, Ocean Engineering, UNESCO, Sea Grant (CA, DE, FL, GA, LA, MD, ME, RI, TX), DOE, EPA, NOAA NURP, NOPP, NSF, Gulf of Maine Marine Research Program, Hudson River Foundation, NC National Estuarine Research Reserve, NC Water Resources Research Institute, Florida Bay Research Program, numerous academic tenure and promotion decisions.

COURSES TAUGHT:

MASC 155, Turbulent Boundary Layers, Summer 1993.
 MASC 253, Coastal Circulation, Fall 1994, 1996, 1998, 2002.
 MASC 256, Transport and Flow in Tidal Inlets, Spring 1997.

STUDENTS SUPERVISED:

Major Advisor:	Jessica Smith	MS, UNC Marine Sciences - current
	Jie Gao	PhD, UNC Marine Sciences - current
	Jesse Bikman	MS, UNC Marine Sciences (2011-13)
	Tony Whipple	MS, UNC Marine Sciences 2007
	Mark Ciccarello	MS, UNC Marine Sciences (2005-07)
	May Becker	PhD, UNC Marine Sciences 2006
	Sarah Carr	PhD, UNC Marine Sciences 2006
	Janelle Reynolds-Fleming	PhD, UNC Marine Sciences 2003
	James Hench	PhD, UNC Marine Sciences 2002
	Zhe Shang	PhD, UNC Marine Sciences (1993-95)
	Roger Grenier	PhD, NC St. Univ, Civil Eng., 1996
	Shending Hu	PhD, UNC Marine Sciences (1989-92)
	Lucy O'Keef	PhD, UNC Physics, April 1992
Thesis Committee Member:	David Marshall	PhD, UNC Marine Sciences
	Mike Muglia	PhD, UNC Marine Sciences
	Ethan Theuerkauf	PhD, UNC Marine Sciences
	Patrick Kerr	PhD, Univ. Notre Dame, Civil Eng, 2013.
	Greg Dusek	PhD, UNC Marine Sciences, 2011
	Amy Haase	MS, NC St. Univ., MEAS, 2009

Nathan Hall	PhD, UNC Marine Sciences, 2009
Choong Ki Kim	PhD, Univ S Alabama, Marine Sciences, 2009
Matt Ogburn	PhD, Duke University, Marine Sciences, 2008
Ethan Kubatko	PhD, Univ. Notre Dame, Civil Eng., 2005
Alfredo Arechavaleta	PhD, UNC Marine Sciences, 2005
Brian Blanton	PhD, UNC Marine Sciences, 2003
Daniel Giffin	PhD, East Car. Univ., Coastal Res. Mgt., 2003
Jun Yong Park	PhD, UNC Marine Sciences, 2000
William Sweet	MS, NC St. Univ., MEAS, 2000
Steve Knowles	PhD, UNC Marine Sciences, 1999
Todd Roessler	MS, UNC Marine Sciences, 1998
Jesse McNinch	PhD, UNC Marine Sciences, 1997
Hunter Lenihan	PhD, UNC Marine Sciences, 1996
Scott Kucera	MS, UNC ESE, 1995
Andre Fortunato	PhD, Oregon Grad. Inst, ESE, 1995
Duncan Young	BS, UNC Env Sci & Eng, 1995
Wei Wang	PhD, UNC Marine Sciences, 1991
Sankey Blanton	MS, UNC Marine Sciences, 1991
James E. Camp	MS, UNC Marine Sciences, 1990
Seok-Yun Kim	PhD, UNC Marine Sciences, 1990
John Schultz	MS, UNC Marine Sciences, 1988

Interns Supervised:

Yohana Dierolf	UNC, fall 2015
Richard Bullock	UNC, fall 2013
Thomas Heath	Univ. Massachusetts, NSF REU, summer 2012
Daniel Ramirez	NC St. Univ., summer 2008
Ben Laroque	UNC, summer 2007, 2008, fall 2008
Gaylin Wells	Rochester Institute of Tech, summer 2002 – 04
Ryan Paerl	East Carteret High Sch., summer 1999, 00
T.J. Lampkin	West Carteret High Sch., summer 1997
Crystal Williams	NC St. Univ., summer 1991, 1993-97
Duncan Young	UNC, summer 1994
Myron Pitcavage	Wilkes Univ., summer 1993
Ron Birkhahn	Wittenberg Univ., summer 1991
Leatrice Bradford	Hampton Univ., summer 1989
Jay Chervenak	Wake Forest Univ., summer 1988
Blair Larsen	Univ. Virginia, summer 1987

Post Doctoral Associates and Research Associates:

Corbitt Kerr	2013-14
Robert Weaver	2008-11
Janelle Fleming	2006-13
Cristina Forbes	2007-10
James Hench	2003-04
Jason Fleming	2002-03, 05-08
Christopher Buzzelli	1999-01
Jesse McNinch	1997-98

PROPOSALS PENDING:

None

SPONSORED RESEARCH - ACTIVE:

- 2015-20 Coastal Resilience Center of Excellence, Department of Homeland Security, **Lead PI**, \$20 million.
- 2015-17 The Apex-Flood Program, Department of Homeland Security, Lead PI, \$808,000
- 2015-17 Understanding and Predicting Salinity Variability and Hypoxic Exposure in Fish Habitats in the Lower Neuse River Estuary, co-PI, North Carolina Coastal Recreational Fishing License Fund, \$196,763.
- 2015-18 EESLR 2015: Understanding and predicting changes in coastal marsh ecosystem services: realizing the combined effects of sea-level rise, tides, and storm surge on marshes and their capacity to protect shorelines, co-PI, NOAA, \$598,885
- 2014-18 SI2-SSI: Collaborative Research: STORM: a Scalable Toolkit for an Open community supporting near Realtime high resolution coastal Modeling, UNC PI, NSF, \$759,047.
- 2014-16 Strengthening the Hurricane Wave and Surge Forecast Guidance provided to Coastal Communities in North Carolina, co-PI, North Carolina Sea Grant, \$25,000.
- 2013-18 A Community Coastal and Ocean Modeling Testbed to Improve Understanding and Operational Forecasts of Extreme Events and Chronic Environmental Conditions Affecting the US, **Lead PI**, NOAA IOOS program, \$7 million.
- 2013-16 Enhancement and Operation of the ADCIRC Surge Guidance System for the Greater New Orleans Area, PI, US Army Corps of Engineers, New Orleans District, \$353,345.
- 2012-17 Defense Coastal / Estuarine Research Program Phase III, co-PI, Department of Defense SERDP, \$200,000.
- 2012-16 Collaborative Research: Interacting Effects of Local Demography and Larval Connectivity on Estuarine Metapopulation Dynamics. co-PI, NSF Ocean Sciences, \$250,000.
- 2008-16 Center of Excellence in Coastal Hazards, \$14.51 million, Department of Homeland Security, **Lead PI** and Center Director.

SPONSORED RESEARCH - COMPLETED:

- 2014-15 Independent Review of the Methodology Used to Determine Wave Hazards and Damages Along the Great Lakes for the National Flood Insurance Program, PI, FEMA, \$230,834.
- 2008-14 Collaborative Research: Linkage of bacterial pathogens to human infectious disease in an estuary subjected to extreme climatic events, co-PI, NSF EID, \$233,740.
- 2011-13 US IOOS Coastal and Ocean Modeling Testbed, NOAA IOOS, \$975,000, Lead PI.
- 2012-13 Using XSEDE for Coastal Model Assessment to Improve Models of Environmental Processes on the Gulf of Mexico and U.S. Atlantic Coasts, Lead PI, NSF XSEDE, 12.5 million service units.
- 2009-13 ADCIRC Surge Guidance System, \$320,131, US Army Corps of Engineers, New Orleans District, PI.
- 2010-12 A Super Regional Testbed to Improve Models of Environmental Processes on the U.S. Atlantic and Gulf of Mexico Coasts. Lead PI, NOAA IOOS, \$4.0 million.
- 2010-11 Collaborative Research: Extension of the ADCIRC Coastal Circulation Model for Predicting Near Shore and Inner Shore Transport of Oil from the Horizon Oil Spill, Lead PI, NSF RAPID, \$200,000.
- 2008-11 ADCIRC Contribution to a Southeast Regional Storm Surge Test Bed, \$243,387, National Oceanic and Atmospheric Administration Coastal Services Center, PI.
- 2008-11 A Prototype Operational Modeling System for Waves, Coastal Currents, Inundation and Hydrologic Flooding for Eastern North Carolina, \$1,243,889, National Oceanic and Atmospheric Administration Coastal Services Center, PI.

- 2008 North Carolina Environmental Observing Network System (NC_EONS), \$148,000, North Carolina Research Competitiveness Fund, Lead PI.
- 2008 Implementation of The Lake Pontchartrain Forecast System for the 2008 Hurricane Season, \$101,512, US Army Corps of Engineers, New Orleans District, PI.
- 2007 Wave-Circulation Model Coupling and Testing in the Near Shore Environment, \$143,000, US Army Corps of Engineers, Engineering Research and Development Center
- 2007-09 A High Resolution Near-Shore Wave Model for the Mid-Atlantic Coast, \$55,973, University Center for Atmospheric Research/COMET
- 2006-12 Dept of Defense, Coastal, Estuarine Research Program - Camp Lejeune, co-PI, SERDP, \$343,092
- 2006-10 CMG Collaborative Research: Adaptive Numerical Methods for Shallow Water Circulation with Applications to Hurricane Storm Surge Modeling, \$167,279, NSF.
- 2006-09 Wave and Circulation Computations on Unstructured Grids, \$134,102, Office of Naval Research.
- 2006-07 Lake Pontchartrain Hurricane Forecast System, \$308,318, US Army Corps of Engineers, New Orleans District.
- 2006-07 Development of a Grid Based Storm Surge and Inundation Modeling System, \$185,190, Southeastern Universities Research Association.
- 2006-07 MORPHOS - 3D Long-wave Hydrodynamics Modeling, \$174,842, US Army Corps of Engineers, Engineering Research and Development Center
- 2005-06 ADCIRC Model Enhancement and Establishment of a Validation Data Site on Bogue Banks, NC, \$32,000, US Army Corps of Engineers, Wilmington District.
- 2004-06 North Carolina Contribution to SURA SCOOP: Data Distribution and Archiving, Model to Model Interfacing and Model Availability in an Open Grid Computing Environment, \$213,883, Southeastern Universities Research Association.
- 2003-07 Impacts of anthropogenic change on the ecology of human pathogens in a eutrophying estuary: the Neuse River Estuary, NC, \$1,600,000, NSF-EID (one of 7 co-PIs).
- 2002-06 Modular Data Assimilation Application with the ADCIRC Circulation Model, \$15,000 UNC portion, NSF-ITR (with J. Muccino, Arizona State Univ., A. Bennett, Oregon State Univ.).
- 2001-06 Atlantic Coastal Environmental Indicators Consortium (ACE INC), EPA, 2001-06, \$5,941,293 (co-Project Director with 8 co-PIs)
- 2001-05 A Multidisciplinary Study of Selective Tidal-Stream Transport: Bio-Physical Coupling and Behavioral Mechanisms, \$99,063, NSF.
- 2001-04 Limited-Area Operational Coastal Ocean Models: Assimilation of Observations from Fixed Platforms on the Continental Shelf and Far-field Forcing from Open Ocean Models, \$442,177, National Ocean Partnership Program, (one of 7 co-PIs)
- 2000-04 ADCIRC Hydrodynamic Circulation and Transport Code Development and Applications, \$147,741 UNC portion, (with J. Westerink, Notre Dame Univ.), US Army Corps of Engineers Waterways Experiment Station.
- 1999-04 Development of a Surface Water Object-Oriented Modeling System (SWOOMS) for the Neuse River Estuary, North Carolina, \$987,884, EPA, (lead PI with 6 co-PIs).
- 1999-01 Neuse River Estuary Modeling and Monitoring Project: Phase II Monitoring, \$295,333, North Carolina Water Resources Research Institute, (lead PI with 5 co-PIs).
- 1998-02 CISNet for the Neuse River Estuary: A Program for Evaluating Nitrogen Driven Eutrophication Associated with Changing Land Use in a Coastal Watershed, \$620,300, EPA (lead PI with 2 co-PIs)

- 1998-02 Geological and Physical Transport Processes on a Cape Attached Shoal, \$250,000, NSF Ocean Sciences (with J. Wells)
- 1997-98 Distance Learning Initiative at Carolina in Marine Sciences (LINC IMS), \$30,000, UNC Chancellor's Instructional Technology Grant.
- 1997-99 Development and Application of a Prognostic Three-Dimensional Baroclinic Capability in the ADCIRC Hydrodynamic Model, \$131,972, Office of Naval Research.
- 1997-98 Exchange Through a Barrier Island Inlet: Modeling and Synthesis, \$7,784, NOAA SABRE program.
- 1997-98 An Interdisciplinary Observational Program for the Neuse River Estuary, NC, \$347,000, North Carolina Department of Environment and Natural Resources, (lead PI with 10 co-PIs).
- 1996-97 The Role of Floating Sargassum Habitat in Mediating Predator-Prey Interactions among Pelagic Fishes on the Continental Shelf of North Carolina, \$5,000, NOAA National Undersea Research Center, (1 of 4 co-PIs).
- 1995-97 The Physical/Hydrographic Characteristics of Shelf-Estuary Exchange Through a Barrier Island Inlet, \$42,000, NOAA SABRE program.
- 1995-96 Implementation of a High Resolution Coastal Ocean Model for Operational Forecasting of Extratropical Storm Surge Along the US East Coast with Initial Emphasis on the North Carolina Coast, \$6,800., University Center for Atmospheric Research/COMET.
- 1995-96 Development of Second Generation Long Wave Hydrodynamic Databases for US Coastal and Continental Margin Waters, \$114,721., US Army Corps of Engineers Waterways Experiment Station.
- 1994-99 Enhancements of the ADCIRC Model for the Analysis of Coastal Inlet Hydrodynamics, \$370,000, (with J. Westerink, Notre Dame Univ.), US Army Corps of Engineers Waterways Experiment Station.
- 1994-95 The Role of Floating Macroalgal Habitat in Promoting the Biodiversity of the Sargassum Ecosystem, \$24,765., (with C. Peterson, M. Hay, N. Lindquist) NOAA CIFO program.
- 1993-94 REU Supplement to Development and Application of the Direct Stress, \$4,838, NSF Ocean Sciences
- 1992 RESEED, Recruitment Experiment Study under Estuarine Energetic Dynamics, \$25,000, (with C. Peterson), NOAA CIFO program.
- 1992-95 Tidal and Storm Surge Circulation Computations for Oregon Inlet, NC, \$85,056, Army Research Office.
- 1992-94 Response of Large Aggregates to Storms: Extension of Current NSF Research to the North Sea, \$16,000, (with J. Wells), NSF International Program.
- 1992-94 Development and Application of the Direct Stress Solution Technique for Modeling Three-Dimensional Circulation in Shallow Waterbodies, \$90,000, NSF Ocean Sciences.
- 1991 Development and Application of a Computer Model for Predicting Water Level and Circulation in Coastal Water Bodies, \$3,000, UNC Junior Faculty Development Award.
- 1990-94 Two and Three-Dimensional Tidal and Storm Surge Circulation Computations for the Western Atlantic Shelf and Gulf of Mexico, \$375,302, (with J. Westerink, Notre Dame Univ.), US Army Corps of Engineers Waterways Experiment Station.
- 1990-92 In Situ Variability of Large Aggregates over a Fluid Mud Bed: Shear Effects, Settling Velocities and Response to Storms, \$100,917, (with J. Wells), NSF Ocean Sciences.
- 1988-89 Development of a Two-Dimensional Numerical Model for Estimating the Long Term Fate of Dredged Material, \$116,093, (with J. Westerink, Texas A&M Univ.), US Army Corps of Engineers Waterways Experiment Station.

- 1987-90 Fates and Effects of Herbicides and Pesticides in Estuaries, \$20,000, EPA, (subcontract to Duke University Marine Lab).
- 1988-90 Regulation and Utilization of Planktonic Primary Production in Pamlico Sound, N.C., \$60,578, (with H. Pearl), North Carolina Sea Grant.
- 1987-88 Turbulent Vertical Mixing Rates in the North Carolina Sounds, \$5,000, UNC Coordinating Committee for Marine Progress Grants.

SELECTED CONFERENCE PRESENTATIONS AND SEMINARS:

- 2016 American Meteorological Society Annual Meeting, Phoenix, AZ
- 2015 14th International Workshop on Wave Hindcasting and Forecasting and 5th Coastal Hazard Symposium, Key West, FL
- 2015 American Meteorological Society Annual Meeting, Phoenix, AZ
- 2014 American Meteorological Society Annual Meeting, Atlanta, GA
- 2013 National Strategic Maritime Risk Stakeholder Alliance Meeting, Purdue University
- 2013 13th International Conf. on Estuarine and Coastal Modeling, San Diego (advisory committee)
- 2013 American Meteorological Society Annual Meeting, Austin, TX
- 2012 66th Interdepartmental Hurricane Conference, Charleston, SC
- 2012 Ocean Sciences Meeting, Salt Lake City, Utah
- 2012 American Meteorological Society Annual Meeting, New Orleans, LA
- 2012 Climate Science in Support of Coastal Management workshop, Charleston, SC, (invited)
- 2011 12th International Conf. on Estuarine and Coastal Modeling, St. Augustine, FL (advis. committee)
- 2011 12th International Workshop on Wave Hindcasting and Forecasting and 3rd Coastal Hazard Symposium, Kohala, HI (invited speaker)
- 2011 1st International Symposium on Large-scale Computational Science and Engineering, Science Council of Japan, Tokyo, Japan (invited plenary speaker)
- 2011 National Hurricane Center, Miami, FL (invited seminar)
- 2011 Coastal Ocean Modeling, Gordon Research Conference, Mt. Holyoke College, S. Hadley, MA
- 2010 American Geophysical Union, Fall meeting, San Francisco, CA (invited speaker)
- 2010 MIT, Dept of Civil and Environmental Engineering, (invited seminar)
- 2010 JSOST Deepwater Horizon Oil Spill Principal Investigator Conference, St. Petersburg, FL (invited)
- 2010 Science Café, Morehead City, NC (invited seminar)
- 2010 UNC-CH, Dept of Environmental Sciences and Engineering (invited seminar)
- 2010 NOAA Cooperative Institute for Climate Studies, Asheville, NC (invited seminar)
- 2009 Progress Energy Water Resources Seminar, (Keynote speaker), McKimmon Center, Raleigh, NC
- 2009 Cornell University, School of Civil and Environmental Engineering, (invited seminar)
- 2009 11th International Conf. on Estuarine and Coastal Modeling, Seattle, WA (advisory committee)
- 2009 Hurricane Surge Workshop, University of South Florida, (invited plenary speaker)
- 2009 Grand Challenges in Coastal Resiliency, Louisiana State Univ, (advisory committee)
- 2008 NOAA IOOS Annual Meeting, Washington, DC
- 2008 USGS/NOAA Coastal Climate Initiative workshop, Washington, DC (invited)
- 2008 NC State University, Dept of Civil Engineering (invited seminar).
- 2007 10th International Conf. on Estuarine and Coastal Modeling, Newport, RI (advisory committee)
- 2007 Coastal Ocean Modeling, Gordon Research Conference, New London, NH (invited speaker)
- 2006 North Carolina Sea Grant Symposium, Coastal Science Serving NC: 1976-2006, (invited speaker)
- 2006 North Carolina Water Resources Research Inst., Annual Conference, (Keynote speaker)
- 2006 NOAA Coastal Inundation Conference, Jacksonville, FL, Feb 2006, (Keynote speaker)
- 2006 American Geophysical Union, Conf. of Experts, Washington, DC, Jan 2006, (invited speaker)
- 2005 American Geophysical Union, Fall meeting, San Francisco, CA (invited Union session speaker)
- 2005 9th International Conf. on Estuarine and Coastal Modeling, Charleston, SC, (session chair)
- 2005 18th Biennial Estuarine Research Federation Conference, Norfolk, VA

- 2004 Physics of Estuaries and Coastal Seas Conference, Merida, Mexico – October 2004
- 2004 Oxygen Dynamics in Chesapeake Bay Revisited, College Park, MD, (invited) – August 2004
- 2004 58th Interdepartmental Hurricane Conference, Charleston, SC, (invited)
- 2003 8th International Conf. on Estuarine and Coastal Modeling, Monterey, CA, (session chair)
- 2003 Coastal Ocean Modeling, Gordon Research Conference, New London, NH (session chair)
- 2002 EPA Science Forum 2002, Washington, DC (invited)
- 2002 AGU Ocean Sciences Conference, Honolulu, HI (session chair)
- 2001 US Navy Finite Element Modeling Workshop, Washington, DC (invited)
- 2001 7th International Conf. on Estuarine and Coastal Modeling, Tampa, FL (session chair)
- 2001 16th Biennial Estuarine Research Federation Conference, Tampa, FL
- 2001 North Carolina Water Resources Research Inst. Annual Conference (session organizer & chair)
- 2000 Physical of Estuaries and Coastal Seas Conference, Norfolk, VA
- 2000 North Carolina Water Resources Research Inst. Annual Conference (session chair)
- 1999 6th International Conf. on Estuarine and Coastal Modeling, New Orleans, LA, (session chair)
- 1999 15th Biennial Estuarine Research Federation Conference, New Orleans, LA.
- 1999 Coastal Ocean Modeling, Gordon Research Conference, New London, NH. (invited)
- 1997 Nutrients in the Neuse River, Working Toward Solutions, New Bern, NC.
- 1997 5th International Conference on Estuarine and Coastal Modeling, Alexandria, VA.
- 1997 SIAM Conf. on Math. & Computational Issues in Geosci., Albuquerque, NM. (Plenary speaker).
- 1997 51st Interdepartmental Hurricane Conference, Miami, FL.
- 1997 ASLO 97 Aquatic Sciences Meeting, Santa Fe, NM.
- 1996 Tidal Science 1996, London, England.
- 1996 3rd Asian-Pacific Conf. on Computational Mechanics, Seoul, Korea. (Invited)
- 1996 AMS 15th Conf. On Weather Analysis and Forecasting, Norfolk, VA.
- 1996 XI International Conf. Computational Methods in Water Resources, Cancun, Mexico. (Invited).
- 1996 7th Pacific Congress on Marine Science and Technology, Honolulu, HI.
- 1995 4th International Conf. on Estuarine and Coastal Modeling, San Diego, CA.
- 1995 Coastal 95, Cancun, Mexico.
- 1995 Next Generation Environmental Models, Computational Methods, Bay City, MI.
- 1995 SIAM Conf. on Math. & Computational Issues in Geosciences, San Antonio, TX. (Invited).
- 1994 JONSMOD'94, Brussels, Belgium (Invited).
- 1994 X International Conf. on Computational Methods in Water Resources, Heidelberg, Germany.
- 1993 3rd International Conf. on Estuarine and Coastal Modeling, Chicago, IL.
- 1993 SIAM Conf. on Mathematical & Computational Issues in Geoscience, Houston, TX. (Invited).
- 1992 JONSMOD'92, Copenhagen, Denmark (Invited).
- 1992 IX International Conf. on Computational Methods in Water Resources, Denver, CO.
- 1992 6th National Conf. on Undergraduate Research, Univ. Minnesota, Minneapolis, MN.
- 1991 2nd Conf. on Estuarine and Coastal Modeling, Tampa, FL.
- 1991 1st US National Congress on Computational Mechanics, Chicago, IL.
- 1991 25th Canadian Meteorological & Oceanographic Soc. Congress, Winnipeg, Canada
- 1991 Nearshore and Estuarine Cohesive Sediment Transport Workshop, St. Petersburg, FL, (Invited)
- 1990 American Geophysical Union, Fall Meeting, San Francisco, CA.
- 1989 American Geophysical Union, Fall Meeting, San Francisco, CA.
- 1987 Symposium on Sedimentation and Erosion, The Agricultural University of Wageningen, The Netherlands. (Invited)
- 1986 American Society of Civil Engineers, Water Forum 86, Long Beach, CA.

US GOVERNMENT BRIEFINGS:

- 2014 R. Luettich, G. Baecher, “Reducing Coastal Risk on the US East and Gulf Coasts”, **led** briefings sponsored by the National Academies National Research Council for: US Army Corps of Engineers; US Council on Environmental Quality, US Office of Management and Budget;

FEMA; EPA; NOAA; US House Transportation and Infrastructure Subcommittee on Water Resources and the Environment.

2010-2013 multiple briefings with US Congressional staffers regarding the Department of Homeland Security Centers of Excellence.

2010 H. Cullen, R. Luettich, G. Holland, R. Douglas, "Hurricanes and Oil Will Mix: Managing Risk Now", June, 30, 2010 - 2 briefings sponsored by the American Geophysical Union, the Congressional Hazards Caucus Alliance, the National Science Foundation, the Pew Center on Global Climate Change, the University Corporation for Atmospheric Research, and the Weather Coalition for: US House Committee on Science and Technology and the US Senate Subcommittee on Disaster Recovery of the Committee on Homeland Security and Governmental Affairs

2009 R. Dalrymple, R. Luettich, J. Boland, "Final Report from the NRC Committee on the Review of the Louisiana Coastal Protection and Restoration (LACPR) Program", participated in 3 briefings sponsored by the National Academies National Research Council for: US Senator Mary Landrieu's office; US House Transportation and Infrastructure Subcommittee on Water Resources and the Environment; US Senate Committee on Environment and Public Works

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