

John M. Bane

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I. EDUCATION

Ph.D.	1975	Physical Oceanography	Florida State University
M.E.	1971	Ocean Engineering	Florida Atlantic University
B.S.	1970	Physics and Mathematics	Western Michigan University

II. PROFESSIONAL EXPERIENCE

1987-present: Professor (Dept. Chair, 1995-2000; Dir. of Graduate Studies, 2004-15, 2018-19)

1982-1986: Associate Professor

1976-1981: Assistant Professor

Department of Marine Sciences
University of North Carolina at Chapel Hill

1986, 1991 and 1997: Visiting Scholar
Scripps Institution of Oceanography
University of California at San Diego

1973-1974: Research Associate
Coastal Studies Institute
Louisiana State University, Baton Rouge

1971-1975: Ph.D. Candidate and Research Assistant
Department of Oceanography
Florida State University, Tallahassee

III. TEACHING (Last Five Years)

MASC 052	<i>FYS: Living with our Oceans and our Atmosphere</i>
MASC 101	<i>The Marine Environment</i>
MASC 108	<i>Our Energy and Climate Transitions</i>
MASC 560	<i>Fluid Dynamics</i>
MASC 705 & 706	<i>How to Give a Seminar & Student Interdisciplinary Seminar</i>
MASC 761	<i>Geophysical Fluid Dynamics</i>
MASC 762	<i>Ocean Circulation Theory</i>
IDST 691H/692H	<i>Honors Thesis</i>

IV. CURRENT RESEARCH SUPPORT

Processes Driving Exchange At Cape Hatteras (PEACH). National Science Foundation. 2016-2020 (Co-PI: H. Seim, UNC) \$1,211,689. Four-institution total budget \$4,979,871.

Comprehensive Gulf Stream Ocean Energy Resource Assessment Using an Integrated Observing and Modeling Approach. North Carolina Alternative Ocean Energy Program. 2013-2017 (Co-PI: R. He, NCSU). UNC budget: \$253,486.

V. PROFESSIONAL ACTIVITIES

University and State of North Carolina Service Activities

Department of Marine Sciences Director of Graduate Studies (2004-15, 2018-19)
Department of Marine Sciences Performance Committee Chair (2004-15, 2018-19)
UNC Graduate School Administrative Board (2009-15)
UNC Graduate School Academic Policy Committee (2009-15)
UNC Academic Calendar Committee (2007-present)
UNC Research Data Management Committee (2003-05)
UNC Faculty Council (2002-05)
Chair, UNC Department of Marine Sciences (1995-2000)
Department of Marine Sciences Acting Chairman (1991)
Department of Marine Sciences Admissions Committee Chair (2000-03)
Curriculum in Marine Sciences Graduate Examination Committee Chair (1987-90)
Curriculum in Marine Sciences Computer Coordinator (1982-92)
Curriculum in Marine Sciences Equal Employment Opportunity Officer (1983-95)
Gubernatorially-appointed representative on the scientific review panel for evaluation of ocean circulation studies off North Carolina (1990-92)

National and International Activities

Principal Scientific Advisor, Apex Wind Energy (2010-14)
Co-Founder, Outer Banks Ocean Energy Corp. (2008-10)
Principal Scientist, Outer Banks Ocean Energy Corp. (2008-10)
Charter Member and First Chairman, SECOM (Southeast Coastal Oceanography and Meteorology) (2007-11)
Convenor, First Airborne Ocean Science Conference (May 2006)
Chair, UNOLS Scientific Committee on Aircraft Oceanographic Research (2002-07)
Member, UNOLS Council (2002-07)
Member, Scientific Review Group, MMS Gulf of Mexico Programs (1997-present)
Associate Editor *Journal of Physical Oceanography* (1992-2000)
Member, CORE Education Committee (1996-2000)
Program Committee, AGU-ASLO Ocean Sciences Meeting (1999-2000)
Member, ONR Coastal Altimetry Working Group (1997)
Member, Science Steering Committees: NSF CoPO and CoOP Programs (1986-94)
Member, NCAR C-130 Research Aircraft Science Panel (1992-94)
NSF Review Panel Member: WOCE Indian Ocean Core Program 1 Studies (1992-94)
AMS Committee on Meteorology and Oceanography of the Coastal Zone (1990-94)
Member, SRG, MMS Straits of Florida, Cape Hatteras, N. Atlantic Programs (1989-94)

NCAR Mid-Sized Jet Scientific Review Committee (1989)
 NCAR Research Aviation Facility Review Panel Member (1987-90)
 Interagency Task Group on Airborne Geoscience (1987-88)
 Consulting Investigator: MASAR and FRED Programs
 SYNOP Pilot Study Coordinator (1985-86)
 Oceanographic Coordinator for the GALE Program (1985-86)
 Session Chairman, AGU Fall 1979, Spring 1981, Spring 1995 Meetings

Reviewer for:

<i>Bulletin of the American Meteorological Society</i>	
<i>Journal of Applied Meteorology</i>	<i>Journal of Atmospheric and Oceanic Technology</i>
<i>Journal of Geophysical Research</i>	<i>Journal of Marine Research</i>
<i>Journal of Physical Oceanography</i>	<i>Journal of Marine Environmental Engineering</i>
<i>Coastal, Estuarine and Shelf Science</i>	<i>Continental Shelf Research</i>
<i>Estuaries</i>	<i>Geophysical Research Letters</i>
<i>Gulf of Mexico Science</i>	<i>Limnology and Oceanography</i>
<i>Progress in Oceanography</i>	<i>Remote Sensing of Environment</i>
Department of Energy	National Science Foundation
National Ctr for Atmospheric Research	NOAA National Undersea Research Center

VI. PUBLICATIONS

A. Refereed Articles

- Hoarfrost A., J. P Balmonte, S. Ghobrial, K. Ziervogel, J. M. Bane, G. Gawarkiewicz, C. Arnosti (2018) Gulf Stream ring intrusion on the Mid-Atlantic Bight shelf affects 1 microbially-driven carbon cycling. *Limnol. And Oceanogr.* (submitted).
- Todd R. E., T. G. Asher, J. Heiderich, J. M. Bane, R. A. Luettich (2018) Transient Response of the Gulf Stream to Multiple Hurricanes in 2017. *Geophys. Res. Lettr.*, 10,509-10,519, <https://doi.org/10.1029/2018GL079180>.
- Li, B., J. Bane, J. F. DeCarolis, R. He, V. Neary, A. R. de Queiroz, A. G. Keeler (2018) The Economics of Ocean Current Energy: A Gulf Stream Case Study. *Energy* (in press).
- Andres, M., M. Muglia, F. Bahr, J. Bane (2018), On the Upper Labrador Sea Water at Cape Hatteras, *Scientific Reports*, 8, 4494, [doi:10.1038/s41598-018-22758-z](https://doi.org/10.1038/s41598-018-22758-z).
- Bane, J. M., R. He, M. Muglia, C. F. Lowcher, Y. Gong, S. M. Haines (2017) Marine Hydrokinetic Energy from Western Boundary Currents. *Annual Review of Marine Science*, doi:10.1146/annurev-marine-010816-060423. Invited Submission. pp 105-123.
- Lowcher, C., J. Bane, Y. Gong, S. Haines, R. He, M. Muglia (2017) Marine Hydrokinetic Power in the Gulf Stream off North Carolina: An Assessment using Observations and Circulation Models. Invited chapter in: *Marine Renewable Energy: Resource Characterization and Physical Effects*, Z. Yang and Andrea Copping, eds. Springer-Nature, pp 237-258. doi: 10.1007/978-3-319-53536-4.
- Muglia, M., C. Lowcher, P. Taylor, R. He, H. Seim, J. Bane, B. Edge (2015) Observation and regional model based Gulf Stream marine hydrokinetic energy resource estimates for North Carolina, *Marine Tech. Society*, 978-0-933957-43-5.
- Nelson, J., R. He, J. C. Warner, J. Bane (2014) Air-sea interaction during strong winter extratropical storm, *Ocean Dynamics*, doi:10.1007/s10236-014-0745-2.

- Mienis, F., G. Duineveld, A. J. Davies, M. Lavaleye, S. W. Ross, H. Seim, J. Bane, H. van Haren, M. Bergman, H. de Haas, S. Brooke, T. van Weering (2014) Cold-water coral growth under extreme environmental conditions, the Cape Lookout area, NW Atlantic. *Biogeosciences*, *11*, 2543-2560. doi:10.5194/bg-11-2543-2014.
- Chen, K., G. G. Gawarkiewicz, S. J. Lentz and J. M. Bane (2014) Diagnosing the Warming of the Northeastern U.S. Coastal Ocean in 2012: A linkage between the atmospheric jet stream variability and ocean response. *J. Geophys. Res.*, *119*, 1–10, doi:10.1002/2013JC009393.
- Brooke, S., S. W. Ross, J. M. Bane, H. E. Seim, C. M. Young (2012) Temperature tolerance of the deep-sea coral *Lophelia pertusa* from the southeastern United States. *Deep-Sea Res.*, doi: 10.1016/j.dsr2.2012.12.001.
- Mienis, F., G. C. A. Duineveld, A. J. Davies, S. W. Ross, H. Seim, J. Bane and T. C. E. van Weering (2012) The influence of near-bed hydrodynamic conditions on cold-water corals in the Viosca Knoll area, Gulf of Mexico. *Deep-Sea Res. I*, *57*, 32-45.
- Putman, N. F., J. M. Bane and K. J. Lohmann (2010) Sea turtle nesting distributions and oceanographic constraints on hatchling migration. *Proc. R. Soc. B*, doi: 10.1098/rspb.2010.1088.
- Davies, A. J., G. C. A. Duineveld, T. C. E. van Weering, F. Mienis, A. M. Quattrini, H. E. Seim, J. M. Bane and S. W. Ross (2010) Short-term environmental variability in cold-water coral habitat at Viosca Knoll, Gulf of Mexico. *Deep-Sea Res. I*, *57*, 199–212, doi:10.1016/j.dsr.2009.10.012.
- Barth, J. A., J. M. Bane, S. D. Pierce and S. M. Haines (2008): The Wind-Driven Coastal Ocean: Now in High-Def. *Oceanography*, *21(4)*, 53.
- Bane, J. M., Y. H. Spitz, R. M. Letelier and W. T. Peterson (2007): Jet stream intraseasonal oscillations drive dominant ecosystem variations in Oregon's summertime coastal upwelling system. *Proc. Nat. Acad. Sci.*, *104(33)*, 13262–13267, doi:10.1073/pnas.070092610.
- Barth, J. A., B. A. Menge, J. Lubchenco, F. Chan, J. M. Bane, A. R. Kirincich, M. A. McManus, K. J. Nielsen, S. D. Pierce and L. Washburn (2007): Delayed Upwelling Alters Nearshore Coastal Ocean Ecosystems in the Northern California Current. *Proc. Nat. Acad. Sci.*, *104(10)*, 3719–3724, doi:10.1073/pnas.0700462104.
- Aretxabaleta, A., J. Nelson, J. Blanton, H. Seim, F. Werner, J. Bane and R. Weisberg (2006): Cold Event in the South Atlantic Bight During Summer of 2003: Anomalous Hydrographic and Atmospheric Conditions. *J. Geophys. Res.*, *111*, C06007, doi:10.1029/2005JC003105.
- Bane, J. M., M. D. Levine, R. M. Samelson, S. M. Haines, M. F. Meaux, N. Perlin, P. M. Kosro and T. Boyd (2005): Atmospheric Forcing of the Oregon Coastal Ocean During the 2001 Upwelling Season. *J. Geophys. Res.*, *110*, C10S02, doi:10.1029/2004JC002653.
- Bane, J. M., R. Bluth, C. Flagg, C. A. Friehe, H. Jonsson, W. K. Melville, M. Prince and D. Riemer (2004): UNOLS Establishes SCOAR to Promote Research Aircraft Facilities for U. S. Ocean Sciences. *Oceanography*, *17(4)*, 176-185.
- Bane, J. M., R. Bluth, C. Flagg, H. Jonsson, W. K. Melville, M. Prince and D. Riemer (2004): UNOLS Now Oversees Research Aircraft Facilities for Ocean Science. *EOS, Trans. Amer. Geophys. Un.*, *85(41)*, pp. 402-405.
- Li, Y., H. Xue and J. M. Bane (2002): Air-Sea Interactions During the Passage of a Winter Storm over the Gulf Stream: A 3D Coupled Atmosphere-Ocean Model Study. *J. Geophys. Res.*, *107(C11)*, 3200, doi:10.1029/2001JC001161.

- Savidge, D. K., and J. M. Bane (2001): Wind and Gulf Stream Influences on Along-shelf Transport and Off-shelf Export at Cape Hatteras, North Carolina. *J. Geophys. Res.*, *106(C6)*, pp. 11,505-11,527.
- Bane, J. M., L. P. Atkinson and D. A. Brooks (2001): Gulf Stream Physical Oceanography at the Charleston Bump: Deflection, Bimodality, Meanders and Upwelling. In: *Island in the Stream: Oceanography and Fisheries of the Charleston Bump*, edited by G. R. Sedberry, American Fisheries Soc., pp. 25-36.
- Nuss, W. A., J. M. Bane, W. T. Thompson, T. Holt, C. Dorman, F. M. Ralph, R. Rotunno, J. Klemp, W. Skamarock, R. M. Samelson, A. Rogerson, C. J. Reason, P. Jackson (2000): Coastally Trapped Wind Reversals: Progress toward Understanding. *Bull. Amer. Meteorol. Soc.*, *81*, pp. 719-743.
- Ralph, F. M., P. J. Neiman, P. O. G. Persson, J. M. Bane, M. L. Cancillo, J. M. Wilczak and W. Nuss (2000): Kelvin Waves and Internal Bores in the Marine Boundary Layer Inversion and Their Relationship to Coastally Trapped Wind Reversals. *Mon. Wea. Rev.*, *128*, pp. 283-300.
- Xue, H., Z. Pan and J. M. Bane (2000): A 2-D Coupled Atmosphere-Ocean Model Study of Air-Sea Interactions During a Cold Air Outbreak Over the Gulf Stream. *Mon. Wea. Rev.* *128*, pp. 973-996.
- Savidge, D. K., and J. M. Bane (1999a): Cyclogenesis in the Deep Ocean Beneath the Gulf Stream: 1. A Description. *J. Geophys. Res.*, *104(C8)*, pp. 18,111-18,126.
- Savidge, D. K., and J. M. Bane (1999b): Cyclogenesis in the Deep Ocean Beneath the Gulf Stream: 2. Dynamics. *J. Geophys. Res.*, *104(C8)*, pp. 18,127-18,140.
- Dorman, C. E., L. Armi, J. M. Bane and D. Rogers (1998): Sea Surface Mixed Layer During the June 10-11, 1994, California Coastally Trapped Event. *Mon. Wea. Rev.*, *126*, pp. 600-619.
- Ralph, F. M., L. Armi, J. M. Bane, C. Dorman, W. D. Neff, P. J. Neiman, W. Nuss and P. O. G. Persson (1998): Observations and Analysis of the 10-11 June 1994 Coastally Trapped Disturbance. *Mon. Wea. Rev.*, *126(9)*, pp. 2435-2465.
- Rogers, D. P., C. E. Dorman, K. A. Edwards, I. M. Brooks, W. K. Melville, S. D. Burk, W. T. Thompson, T. Holt, L. M. Strom, M. Tjernstrom, B. Grisogono, J. M. Bane, W. A. Nuss, B. M. Morley, and A. J. Schanot (1998): Highlights of Coastal Waves 1996. *Bull. Amer. Meteorol. Soc.*, *79(7)*, pp. 1307-1326.
- Thompson, W. T., and J. M. Bane (1998): Modeling and Observations of Coastally Trapped Wind Reversals. *Proc. of the 78th AMS Annual Meeting*. 11-16 January, 1998, Phoenix AZ, Amer. Meteorol. Soc., Boston, pp. 194-201.
- Bane, J. M. (1997): Airflow and Stratification in Propagating Southerly Surges within the Summertime Marine Layer off California and Oregon. *Proceedings, 12th Symposium on Boundary Layers and Turbulence*, Amer. Meteorol. Soc., Boston, pp. 346-347.
- Bane, J. M. (1997): Rapid-Response Aircraft Surveys of Short-Lived Events in the Coastal Atmosphere. In: *Rapid Environmental Assessment*, edited by E. Pouliquen, A. D. Kirwan and R. T. Pearson, Available from: Office of Naval Research, UNSLO to SACLANT, Arlington VA, pp. 179-184.
- Xue, H. J., and J. M. Bane (1997): A Numerical Investigation of the Gulf Stream and its Meanders in Response to Cold Air Outbreaks. *J. Phys.. Oceanogr.*, *27(12)*, pp. 2606-2629.
- Johns, W. E., T. J. Shay, J. M. Bane and D. R. Watts (1995): Gulf Stream Structure, Transport and Recirculation near 68°W. *J. Geophys. Res.*, *100(C1)*, pp. 817-838.
- Ralph, F. M., P. J. Neiman, P. O. Persson, W. D. Neff, J. Miletta, L. Armi and J. M. Bane (1995): Observations of an Orographically Trapped Disturbance along the California Coast on 10-11

- June 1994. *Proceedings, Seventh Conference on Mountain Meteorology*, Amer. Meteorol. Soc., Boston, pp. 204-211.
- Shay, T. J., J. M. Bane, D. R. Watts and K. L. Tracey (1995): Gulf Stream Flow Field and Events Near 68°W. *J. Geophys. Res.*, 100(C11), pp. 22,565-22,589.
- Watts, D. R., J. M. Bane, K. L. Tracey and T. J. Shay (1995): Gulf Stream Path and Thermocline Structure near 74°W and 68°W. *J. Geophys. Res.*, 100(C9), pp. 18,291-18,312.
- Xue, H. J., J. M. Bane and L. M. Goodman, 1995: Modification of the Gulf Stream through Strong Air-Sea Interactions in Winter: Observations and Numerical Simulations. *J. Phys. Oceanogr.*, 25(4), pp. 533-557.
- Bane, J. M., 1994: The Gulf Stream System: An Observational Perspective. In: *The Oceans: Physical- Chemical Dynamics and Human Impact*, edited by S. K. Majumdar, E. W. Miller, G. S. Forbes, R. F. Schmalz and A. A. Panah, The Pennsylvania Academy of Science, pp. 88-107.
- Bane, J. M., C. D. Winant and J. E. Overland, 1990: Planning for Coastal Air-Sea Interaction Studies in CoPO. *Bull. Amer. Meteor. Soc.*, 71(4), pp. 514-519.
- Bane, J. M., 1989: Results From the Genesis of Atlantic Lows Experiment Physical Oceanographic Studies: Introduction. *J. Geophys. Res.*, 94(C8), p. 10,685.
- Bane, J. M., and K. E. Osgood, 1989: Wintertime Air-Sea Interaction Processes across the Gulf Stream. *J. Geophys. Res.*, 94(C8), pp. 10,755-10,772.
- Bane, J. M., L. M. O'Keefe and D. R. Watts, 1989: Mesoscale Eddies and Submesoscale, Coherent Vortices: Their Existence near and Interactions with the Gulf Stream. pp. 501-518. In: *Mesoscale/Synoptic Coherent Structures in Geophysical Turbulence*, edited by J. C. J. Nihoul and B. M. Jamart, Elsevier Science Publishers, Amsterdam, 841 pp.
- Dewar, W. K., and J. M. Bane, 1989: Gulf Stream Dynamics. Part I: Mean Flow Dynamics at 73°W. *J. Phys. Oceanogr.*, 19(10), pp. 1558-1573.
- Dewar, W. K., and J. M. Bane, 1989: Gulf Stream Dynamics. Part II: Eddy Energetics at 73°W. *J. Phys. Oceanogr.*, 19(10), pp. 1574-1587.
- Pilskaln, C. H., A. C. Neumann, and J. M. Bane, 1989: Periplatform Carbonate Flux in the Northern Bahamas. *Deep-Sea Res.*, 36(9), pp. 1391-1406.
- Bane, J. M., 1988: The Gulf Stream off the East Coast of the United States. *Chinese J. Oceanol. Limnol.*, 6(4), pp. 334-342.
- Bane, J. M., O. B. Brown, R. H. Evans, and P. Hamilton, 1988: Remote Forcing of Shelfbreak Currents by the Gulf Stream in the Mid-Atlantic Bight. *Geophys. Res. Letters*, 15(5), pp. 405-407.
- Bane, J. M., and W. K. Dewar, 1988: Gulf Stream Bimodality and Variability downstream of the Charleston Bump. *J. Geophys. Res.*, 93(C6), pp. 6695-6710.
- Osgood, K. E., J. M. Bane and W. K. Dewar, 1987: Vertical Velocities and Dynamical Balances in Gulf Stream Meanders. *J. Geophys. Res.*, 92(C12), pp. 13,029-13,040.
- Blanton, J. O., T. N. Lee, L. P. Atkinson, J. M. Bane, A. Riordan and S. Raman, 1987: Oceanographic Studies during Project GALE. *Trans. Amer. Geophys. Un.*, 68(48), pp. 1626-1637.
- Chew, F., J. M. Bane, and D. A. Brooks, 1985: On Vertical Motion, Divergence and the Thermal Wind Balance in Cold-Dome Meanders: A Diagnostic Study. *J. Geophys. Res.*, 90(C2), pp. 3173- 3183.
- Dewar, W. K., and J. M. Bane, 1985: The Subsurface Energetics of the Gulf Stream near the Charleston Bump. *J. Phys. Oceanogr.*, 15(12), pp. 1771-1789.

- Luther, M. E., and J. M. Bane, 1985: Mixed Instabilities in the Gulf Stream over the Continental Slope. *J. Phys. Oceanogr.*, 15(1), pp. 3-23.
- Bane, J. M., and M. H. Sessions, 1984: A Field Performance Test of the Sippican Deep Aircraft-Deployed Expendable Bathythermograph. *J. Geophys. Res.*, 89(C3), pp. 3615-3621.
- Bane, J. M., 1983: Initial Observations of the Subsurface Structure and Short-Term Variability of the Seaward Deflection of the Gulf Stream off Charleston, South Carolina. *J. Geophys. Res.*, 88(C8), pp. 4673-4684.
- Brooks, D. A., and J. M. Bane, 1983: Gulf Stream Meanders off North Carolina During Winter and Summer 1979. *J. Geophys. Res.*, 88(C8), pp. 4633-4650.
- Hood, C. A. and J. M. Bane, 1983: Subsurface Energetics of the Gulf Stream Cyclonic Frontal Zone off Onslow Bay, North Carolina. *J. Geophys. Res.*, 88(C8), pp. 4651-4662.
- Legeckis, R., and J. M. Bane, 1983: Comparison of the TIROS-N Satellite and Aircraft Measurements of Gulf Stream Surface Temperatures. *J. Geophys. Res.*, 88(C8), pp. 4611-4616.
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- Bane, J. M., D. A. Brooks, and K. R. Lorenson, 1981: Synoptic Observations of the Three-Dimensional Structure and Propagation of Gulf Stream Meanders along the Carolina Continental Margin. *J. Geophys. Res.*, 86(C7), pp. 6411-6425.
- Brooks, D. A. and J. M. Bane, 1981: Gulf Stream Fluctuations and Meanders over the Onslow Bay Upper Continental Slope. *J. Phys. Oceanogr.*, 11(2), pp. 247-256.
- Hine, A. C., R. J. Wilber, J. M. Bane, A. C. Neumann, and K. R. Lorenson, 1981: Offbank Transport of Carbonate Sands along Open, Leeward Bank Margins: Northern Bahamas. *Marine Geology*, 42, pp. 327-348. Also appeared in: *Developments in Sedimentology*, C. A. Nittrouer (ed.), Elsevier, New York, 449 pp.
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- Bane, J. M. and D. A. Brooks, 1979: Gulf Stream Meanders along the Continental Margin from the Florida Straits to Cape Hatteras. *Geophys. Res. Letters*, 6 (4), pp. 280-282.
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- Wiseman, W. J., J. M. Bane, S. P. Murray, and M. W. Tubman, 1976: Small-Scale Temperature and Salinity Structure over the Inner Continental Shelf West of the Mississippi River Delta. *Mem. Soc. Roy. des Sciences de Liege, 6e serie, tome X*, pp. 277-285.
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B. Notes, Published Abstracts and Presentations

- Muglia M., He R., Lowcher C., Bane J., Taylor P., Edge B. Observation and regional model based Gulf Stream marine hydrokinetic energy resource estimates for North Carolina, Paper presented at MTS/IEEE Oceans 2015: May 18-21, 2015. Genova, Italy. DOI: 10.1109/OCEANSGenova.2015.7271441
- Bane, J., R. He, M. Muglia, C. Lowcher, Y. Gong, S. Haines, J. VanZwieten (2016) Marine Hydrokinetic Energy from Western Boundary Currents. Presentation at Amer. Geophys. Un. Meeting in San Francisco, December 2016.
- Muglia, M., Taylor, P., Bane, J., Haines, S., Seim, H., Lowcher, C., Gong, Y. (2016). Gulf Stream Hydrokinetic Energy Resource Characterization off Cape Hatteras, N.C., Marine Energy Technology Symposium, Washington, D.C. April 2016.
- Bane J. and R. He, Gulf Stream Power Assessment, 5th Annual North Carolina Renewable Ocean Energy Symposium, Coastal Studies Institute, March 16, 2016.
- He, R. Bane, J., Muglia M., Lowcher, C., Taylor P., Gong, Y., Gulf Stream marine hydrokinetic energy resource characterization off Cape Hatteras, North Carolina, invited talk presented at MTS/Oceans 2016, Shanghai, China, April 10-13, 2016.
- Chen, K., G. Gawarkiewicz, S. Lentz, Y. Kwon, G. Zhang, J. Bane, Heat Balance in the Northwest Atlantic Coastal Ocean: the Role of Atmospheric Forcing versus Ocean Advection during an Extreme Warming, Presentation at Ocean Sciences Meeting, New Orleans, February 2016.
- Fewings, M., L. Washburn, C. Dorman, C. Gotschalk, K. Brown, K. Chen, and J. Bane, The Effect of Jet Stream Position on Wind Relaxations off Central and Southern California, U.S.A. Presentation at Ocean Sciences Meeting, New Orleans, February 2016.
- Muglia M., He R., Lowcher, C., Bane J., Taylor P., Gong, Y., Gulf Stream marine hydrokinetic energy resource characterization off Cape Hatteras, North Carolina, Poster presented at American Geophysical Union meeting: December 14-18, 2015. San Francisco.
- Fewings, M., L. Washburn, C. Dorman, C. Gotschalk, K. Brown, K. Chen, J. Bane, D. Oldenburg, and K. Flynn, Wind relaxations off California and the ocean response, Presentation at the Gordon Research Conference, July 2015.
- Lowcher, C. F., Bane, J. M., He, R., Muglia, M., Gong, Y.: Gulf Stream MHK Power Characteristics off Cape Hatteras, North Carolina, Ocean Sciences Meeting, Honolulu, 2014.
- Lowcher, C. F., Bane, J. M., Muglia, M., He, R., Gong, Y., Gulf Stream Power Characteristics Near Cape Hatteras, Regional Model vs. Direct Current Observation, AGU Fall Meeting, 2014, San Francisco.
- Fewings, M., M Aristizábal, K. Brown, L. Washburn, C. Gotschalk, D. Oldenburg, C. Dorman, K. Chen, J. Bane, Wind Relaxations Near Pt. Conception, California and the Ocean Response, Presentation at the AGU/ASLO Meeting, 2014.
- Fewings, M., L. Washburn, C. Dorman, C. Gotschalk, K. Chen, J. Bane, K. Brown, Wind Relaxations in the California Current Upwelling System. International Ocean Vector Winds Science Team Meeting, French Research Institute for Exploitation of the Sea (IFREMER), Brest, France, June 2014.

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<http://www.aslo.org/orlando2008/files/2008osm-abstracts-wrk.pdf>
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- Management of State-Owned Research Vessels, 1977. Committee Technical Report to the North Carolina Marine Science Council, 106 pp. (with T. B. Curtin).
- Bane, J. M., 1975: Barotropic and Baroclinic Coastal-Trapped Waves in an Upwelling Frontal Zone. Ph.D. Dissertation, Dept. of Oceanography, The Florida State University, Tallahassee, Florida, 112 pp.
- Physical Oceanography (appendix III), Environmental Assessment of a Louisiana Offshore Oil Port and Appertinent Pipeline and Storage Facilities, 1974. *Technical Report of the Center for Wetlands Resources*, Louisiana State University, Baton Rouge. Four Volumes, 1033 pp.
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VII. DIRECTION OF STUDENTS AND POST-DOCTORAL SCHOLARS

Undergraduate Students Directed

Caroline F. Lowcher, Honors B.S. in Applied Mathematics and Interdisciplinary Studies (ocean physics and biology). Honors Thesis: Gulf Stream Power Characteristics Near Cape Hatteras: Regional Model vs. Direct Current Observations. Graduation date May 2015.

M.S. Students Directed

Chen-San Du: Some Aspects of the Theory of Topographic Rossby Waves in a Baroclinic Boundary Current. 1980.

Karen R. Lorenson: Three-Dimensional, Mesoscale Characteristics of the Gulf Stream Thermal Frontal Zone South of Cape Hatteras. 1980.

Mark E. Luther: Coastal-Trapped and Frontal-Trapped Waves in a Continuously Stratified Western Boundary Current. 1980.

Carroll A. Hood: Subsurface Energetics of the Cyclonic Gulf Stream Frontal Zone off Onslow Bay, North Carolina. 1981.

Cynthia M. Seay: Characteristics of the Gulf Stream Sea Surface Temperature Field Between Savannah, Georgia and Cape Hatteras, North Carolina. 1981.

Leonidas Cordova: The Gulf Stream's Western Surface Temperature Front Between Cape Canaveral and Cape Hatteras, 1976-1978: Basic Statistical and Principal Component Analyses. 1984.

Kenric E. Osgood: Vertical Velocities, Structure and Dynamics of Gulf Stream Meanders in the South Atlantic Bight. 1986.

John R. Schultz: Structure and Propagation of Topographic Rossby Waves Northeast of Cape Hatteras North Carolina. 1987.

Lauren M. Goodman: The Heat Budget of the Gulf Stream during Strong Atmospheric Forcing. 1988.

Sankey L. Blanton: Computations of Vertical Velocity in the Gulf Stream Northeast of Cape Hatteras, North Carolina. 1991.

Melanie Meaux: The Marine Atmospheric Boundary Layer over the Oregon Coastal Upwelling System During Summer 2001. 2004.

Elaine Monbureau: The Atmospheric Internal Boundary Layer in a Coastal Upwelling Region: Atmospheric Structure and Oceanic Consequences. 2009.

Ph.D. Students Directed

Mark E. Luther: Mixed Instabilities in the Gulf Stream over the Continental Slope. 1982.

Wei Wang: Gulf Stream Downstream of Cape Hatteras: Model/Data Comparisons. 1991.

Dana K. Savidge: Cyclogenesis in the Deep Ocean Beneath the Gulf Stream. 1997.

May-Ling Becker: 2007 (co-advisor).

Raj Saha: 2011 (co-advisor)

Lu Han: Current student (co-advisor)

Post-Doctoral Scholars Directed

William K. Dewar, 1983-84	Wei Wang, 1991
Huijie Xue, 1991-92	Dana K. Savidge, 1997-98