

CURRICULUM VITAE

Raleigh Robert Hood

Horn Point Laboratory

University of Maryland Center for Environmental Science

P.O. Box 775

Cambridge, Maryland 21613

Phone: 410-221-8434

Fax: 410-221-8490

Email: rhood@hpl.umces.edu

I. EDUCATION

1983 B.Sc. University of Washington, Oceanography.

1990 Ph.D. University of California, San Diego, Scripps Institution of Oceanography.

II. PROFESSIONAL BACKGROUND

- 1990-91 Post-doctoral Investigator, College of Oceanography, Oregon State University, Corvallis, Oregon.
- 1991-92 Post-doctoral Investigator, Division of Marine Biology and Fisheries, Rosenstiel School of Marine and Atmospheric Science, University of Miami, Miami, Florida.
- 1992-95 Research Associate, Division of Meteorology and Physical Oceanography, Rosenstiel School of Marine and Atmospheric Science, University of Miami, Miami, Florida.
- 1995-01 Assistant Professor, University of Maryland, Center for Environmental Science, Horn Point Laboratory, Cambridge Maryland.
- 2001-07 Associate Professor, University of Maryland, Center for Environmental Science, Horn Point Laboratory, Cambridge Maryland.
- 2007-present Professor, University of Maryland, Center for Environmental Science, Horn Point Laboratory, Cambridge Maryland.

Awards and Special Recognition

1983 B.Sc. *cum laude*, University of Washington

1984 ARCS Scholarship, Scripps Institution of Oceanography

2000 Marine Estuarine and Environmental Sciences Graduate Education Award

2012 Frolich Fellow, Commonwealth Scientific and Industrial Research Organization, Australia

III. RESEARCH

A. Areas of professional expertise

Biological Oceanography and Biogeochemical Modeling.

B. Publications

1. Papers and Chapters in Refereed Journals and Books (including papers that have been accepted or in press)

- Nishitani, L., **R. Hood**, J. Wakeman, and K. K. Chew (1984) Potential importance of an endoparasite of *Gonyaulax* in paralytic shellfish poisoning outbreaks. In: *Seafood Tns*, Edward P. Ragelis (ed.), American Chemical Society, pp. 139-149.
- Hood, R. R.**, M. R. Abbott, A. Huyer, and P. M. Kosro (1990) Surface patterns in temperature, flow, phytoplankton biomass, and species composition in the coastal transition zone off northern California. *Journal of Geophysical Research*, **95**: 18081-18094.
- Hood, R. R.**, M. R. Abbott, and A. Huyer (1991) Phytoplankton and photosynthetic light response in the coastal transition zone off northern California in June 1987. *Journal of Geophysical Research*, **96**: 14769-14780.
- Hood, R. R.**, S. Neuer, and T. J. Cowles (1992) Autotrophic production, biomass and species composition at two stations across an upwelling front. *Marine Ecology Progress Series*, **83**: 221-232.
- Olson, D. B., and **R. R. Hood** (1994) Modelling pelagic biogeography. *Progress in Oceanography*, **34**: 161-205.
- Hood, R. R.** (1995) Light response of phytoplankton in the South Atlantic ocean: Interpretation of observations and application to remote sensing. *Journal of Geophysical Research*, **100**: 10927-10942.
- Matrai, P. A., M. Vernet, **R. Hood**, A. Jennings, E. Brody and S. Saemundsdottir (1995) Light-dependence of carbon and sulfur production by polar clones of the genus *Phaeocystis*. *Marine Biology*, **124**: 157-167.
- McCreary, J. P., Jr., K. E. Kohler, **R. R. Hood**, and D. B. Olson (1996) A four-component Ecosystem model of biological activity in the Arabian Sea. *Progress in Oceanography*, **37**: 193-240.
- Hood, R. R.**, H. V. Wang, J. E. Purcell, E. D. Houde, and L. W. Harding (1999) Modeling Particles and pelagic organisms in Chesapeake Bay: Convergent features control plankton distributions. *Journal of Geophysical Research*, **104**: 1223-1243.
- Stickney, H. L., **R. R. Hood**, and D. K. Stoecker (2000) The impact of mixotrophy on planktonic marine ecosystems. *Ecological Modeling*, **125**: 203-230.
- Hood, R. R.**, A. F. Michaels, and D. G. Capone (2000) Answers sought to the enigma of marine nitrogen fixation. *EOS*, **81**: 133, 138-139.
- Hood, R. R.**, N. R. Bates, D. G. Capone, and D. B. Olson (2001) Modeling the effect of nitrogen fixation on carbon and nitrogen fluxes at BATS. *Deep-Sea Research*, 2nd Special on the U.S. JGOFS Time-Series Stations, **48**: 1609-1648.
- McCreary, J. P., K. H. Kohler, **R. R. Hood**, S. Smith, J. Kindle, A. Fisher and R. A. Weller (2001) Influences of diurnal and intraseasonal forcing on mixed-layer and biological variability in the central Arabian Sea. *Journal of Geophysical Research*, **106**: 7139-7155.
- Matanoski, J. C., **R. R. Hood**, and J. E. Purcell (2001) The effect of prey on swimming patterns of the scyphomedusa *Chrysaora quinquecirrha* and implications for feeding efficiency. *Marine Biology*, **139**: 191-200.

- Kemp, W. M., M. T. Brooks, and **R. R. Hood** (2001) Nutrient enrichment, habitat variability and trophic transfer efficiency in simple models of pelagic ecosystems. *Marine Ecology Progress Series*, **223**: 73-87.
- Hood, R. R.**, A. Subramaniam, L. R. May, E. J. Carpenter, and D. G. Capone (2002) Remote estimation of nitrogen fixation by *Trichodesmium*. *Deep-Sea Research*, 1st Special Issue on the U.S. JGOFS Synthesis and Modeling Project, **49**: 123-147.
- Subramaniam, A, **R. R. Hood**, C. W. Brown, E. J. Carpenter, and D. G. Capone (2002) Detecting *Trichodesmium* blooms in SeaWiFS imagery. *Deep-Sea Research*, 1st Special Issue on the U. S. JGOFS Synthesis and Modeling Project, **49**: 107-121.
- Xu, J., S.-Y. Chao, **R. R. Hood**, H. V. Wang, and W. C. Boicourt (2002) Assimilating scanfish data into a model of a partially mixed estuary. *Journal of Geophysical Research*, **107**: 10.1029/2000JC000626.
- Anderson J. T., D. K. Stoecker, and **R. R. Hood** (2002) Formation of two cysts by a mixotrophic dinoflagellate, *Pfiesteria piscicida*. *Marine Ecology Progress Series*, **246**: 95-104.
- Anderson J. T., **R. R. Hood**, and X. Zhang (2002) Quantification of *Pfiesteria piscicida* growth and encystment parameters using a numerical model. *Marine Ecology Progress Series*, **246**: 105-113.
- Iglesias-Rodrigues, M. D., R. A. Armstrong, R. Feely, **R. Hood**, J. Kleypas, J. D. Milliman, C. Sabine, and J. Sarmiento (2002) Calcium carbonate in a changing ocean: Implications for the marine carbon cycle, carbonate producing organisms, and global climate. *EOS*, **83**: 365, 374-375.
- Zhang, X., J. T. Anderson, and **R. R. Hood** (2003) Modeling *Pfiesteria* population dynamics: A new approach for tracking size and mass in mixotrophic species. *Marine Ecology Progress Series*, **256**: 29-44.
- Hood, R. R.**, K. E. Kohler, J. P. McCreary, and S. L. Smith (2003) A four-dimensional validation of a coupled physical-biological model of the Arabian Sea. *Deep-Sea Research*, 2nd Special Issue on the U.S. JGOFS Synthesis and Modeling Project, **50**: 2917-2945.
- Ammerman, J. W., **R. R. Hood**, D. A. Case, and J. B. Cotner (2003) Phosphorus deficiency in the Atlantic: An emerging paradigm in Oceanography. *EOS*, **84 (18)**: 165,170.
- Matanoski, J. C., **R. R. Hood**, R. L. Owens, and J. E. Purcell (2004) Patterns in swimming by a scyphomedusa: A novel approach to quantifying behavior in individuals. *Marine Biology*, **145(2)**: 303-313.
- Hood, R. R.**, V. J. Coles, and D. G. Capone (2004) Modeling the distribution of *Trichodesmium* and nitrogen fixation in the Atlantic Ocean. *Journal of Geophysical Research*, **109(C6)**, C06007, doi: 10.1029/2002JC019001753.
- Coles, V. J., **R. R. Hood**, M. Pascual, and D. G. Capone (2004) Modeling the impact of *Trichodesmium* and nitrogen fixation in the Atlantic Ocean. *Journal of Geophysical Research*, **109 (C6)**, C06007, doi: 10.1029/2002JC001754.
- Coles, V. J., C. Wilson, and **R.R. Hood** (2004) Remote sensing of new production fuelled by nitrogen fixation. *Geophysical Research Letters*, **31**: L06031, doi: 10.1029/2003GL019018.

- North, E. W., S.-Y. Chao, L. P. Sanford, and **R. R. Hood** (2004) The influence of wind and river pulses on an estuarine turbidity maximum: Numerical studies and field observations in Chesapeake Bay. *Estuaries*, **27(1)**: 132-146.
- Wiggert, J. D., **R. R. Hood**, K. Banse, and J. C. Kindle (2005) Monsoon-driven biogeochemical processes in the Arabian Sea. *Progress in Oceanography*, **65**: 176-213.
- North, E. W., **R. R. Hood**, S.-Y. Chao, and L. P. Sanford (2005) The influence of episodic events on transport of striped bass eggs to the estuarine turbidity maximum area. *Estuaries*, **28(1)**: 108-123.
- Xu, J., **R. R. Hood**, and S.-Y. Chao (2005) Modeling the light field in a partially mixed estuary. *Estuaries*, **28**: 572-580.
- Vinayachandran, P. N., J. P. McCreary, **R. R. Hood**, and K. E. Kohler (2005) A numerical investigation of phytoplankton blooms in the Bay of Bengal during the Northeast Monsoon. *Journal of Geophysical Research*, **110 (C12)**: 10.1029/2005JC002966.
- Matanoski, J. C., and **R. R. Hood** (2005) An individual-based numerical model of medusa swimming behavior and implications for foraging efficiency and spatial distributions. *Marine Biology*, **149(3)**: 595-608.
- Hood, R. R.**, and E. A. Laws et al. (2006) Pelagic functional group modeling: Progress, challenges and prospects. *Deep-Sea Research*, 3rd Special Issue on the U.S. JGOFS Synthesis and Modeling Project, **53**: 459-512.
- Friedrichs, M. A. M., **R. R. Hood**, and J. D. Wiggert (2006) Ecosystem model complexity versus physical forcing: Quantification of their relative impact with assimilated Arabian Sea data. *Deep-Sea Research*, 3rd Special Issue on the U.S. JGOFS Synthesis and Modeling Project, **53**: 576-600.
- North, E. W., **R. R. Hood**, S.-Y. Chao, and L. P. Sanford (2006) Using a random displacement model to simulate turbulent particle motion in a baroclinic frontal zone: a new implementation scheme and model performance tests. *Journal of Marine Systems*, **60**: 365-380.
- Xu, J., and **R. R. Hood** (2006) Modeling biogeochemical cycles in Chesapeake Bay with a coupled physical-biogeochemical model. *Coastal, Shelf and Estuarine Science*, **69 (1-2)**: 19-46.
- Hood, R. R.**, X. Zhang, P. M. Glibert, M. R. Roman and D. K. Stoecker (2006) Modeling the influence of nutrients, turbulence and grazing on *Pfiesteria* population dynamics. *Harmful Algae*, **5**: 459-479.
- Decker, M. B., C. W. Brown, **R. R. Hood**, J. E. Purcell, T. F. Gross, J. C. Matanoski, R. L. Owens and E. M. Setzler-Hamilton (2006) Predicting the distribution of the scyphomedusa, *Chrysaora quinquecirrha*, in Chesapeake Bay. *Marine Ecology Progress Series*, **329**: 99-113.
- Hood, R. R.**, S. Wajih A. Naqvi, J. D. Wiggert and A. Subramaniam (2007) Biogeochemical and ecological research in the Indian Ocean. *Eos Transactions AGU*, **88(12)**: 144.
- Coles, V. J. and **R. R. Hood** (2007) Modeling the impact of iron and phosphorus limitations on nitrogen fixation in the Atlantic Ocean. *Biogeosciences*, **4**: 455-479.

- Hood, R. R.**, E. A. Laws, M. J. Follows and D. A. Siegel (2007) Chapter 11: Modeling and prediction of marine microbial populations in the genomic era. *Oceanography*, 20(2): 155-165.
- Friedrichs, M. A. M., J. A. Dusenberry, L. A. Anderson, R. A. Armstrong, F. Chai, J. R. Christian, S. C. Doney, J. Dunne, M. Fujii, **R. Hood**, D. J. McGillicuddy Jr., J. K. Moore, M. Schartau, Y. H. Spitz, and J. D. Wiggert (2007) Assessment of skill and portability in regional marine biogeochemical models: Role of multiple planktonic groups, *Journal of Geophysical Research*, **112**: C08001, doi:10.1029/2006JC003852.
- North, E. W, Z. Schlag, **R. R. Hood**, M. Li, L. Zhong, T. Gross, and V. S. Kennedy (2008) Vertical swimming behavior influences the dispersal of simulated oyster larvae in a coupled particle-tracking and hydrodynamic model of Chesapeake Bay. *Marine Ecology Progress Series*, 359: 99-115.
- Voinov, A., **R. R. Hood**, J. D. Daves, H. Assaf, and R. Stewart. Building a Community Modeling and Information Sharing Culture. In: Jakeman, A., A. A. Voinov, A. Rizzoli, S. Chen (Eds.), *State of the art and futures in Environmental Modelling and Software*, Elsevier (2008).
- Hood, R. R.**, et al. (2008) Research opportunities and challenges in the Indian Ocean. *Eos, Transactions, American Geophysical Union*, 89(13): 125-126.
- Hood, R. R.**, and J. R. Christian (2008) Chapter 33: Ocean N-cycle modeling. In: *Nitrogen in the Marine Environment*, 2nd Edition, E. Carpenter, D. Capone, D. Bronk and M. Mullholland (eds), pp. 1445-1496, Elsevier.
- Smith, K. A., E. W. North, F. Shi, S.-N. Chen, **R. R. Hood**, E. W. Koch, and R. I. E. Newell (2009) Modeling the effects of oyster reefs and breakwaters on seagrass growth. *Estuaries and Coasts*, 32: 748-757.
- Hood, R. R.**, J. D. Wiggert and S. W. A. Naqvi (2009) Indian Ocean Research: Opportunities and challenges. In: Indian Ocean Biogeochemical Processes and Ecological Variability, J. D. Wiggert, R. R. Hood, S. W. A. Naqvi, K. H. Brink, S. L. Smith (eds.), AGU Monograph Series, American Geophysical Union, Washington, D.C., pp. 409-428.
- McCreary, J. P., R. Murtugudde, J. Vialard, P. N. Vinayachandran, J. D. Wiggert, **R. R. Hood**, D. Shankar, and S. Shetye (2009) Biophysical Processes in the Indian Ocean. In: Indian Ocean Biogeochemical Processes and Ecological Variability, J. D. Wiggert, R. R. Hood, S. W. A. Naqvi, K. H. Brink, S. L. Smith (eds.), AGU Monograph Series, American Geophysical Union, Washington, D.C., pp. 9-32.
- Constantin de Magny, G., W. Long, C. W. Brown, **R. R. Hood**, A. Huq, R. Murtugudde, and R. R. Colwell (2009) Predicting the distribution of *Vibrio spp.* In the Chesapeake Bay: *Vibrio cholerae* a case study. *EcoHealth*, DOI: 10.1007/s10393-009-0273.
- North, E. W., D. M. King, J. Xu, **R. R. Hood**, R. I. E. Newell, K. Paynter, M. L. Kellogg, M. K. Liddel, and D. F. Boesch (2010) Linking optimization and ecological models in a decision support tool for oyster restoration and management. *Ecological Applications*, 20(3): 851-866.
- Sexton, M. A., **R. R. Hood**, J. Sarkodee-adoo and A. M. Liss (2010) Response of *Chrysaora quinquecirrha* medusae to low temperature. *Hydrobiologia*, 645: 125-133.
- Voinov, A. A., C. DeLuca, **R. R. Hood**, S. Peckham, C. R. Sherwood, and J. P. M. Syvitski (2010) A community approach to Earth systems modeling. *Eos*, 91(13): 117-118.

Hood, R. R., S. W. A. Naqvi, J. D. Wiggert, M. R. Landry, T. Rixen, L. E. Beckley, C. Goyet and G. L. Cowie (2011) Sustained Indian Ocean Biogeochemistry and Ecosystem Research (SIBER): A Basin Wide Ecosystem Program, Science Plan and Implementation Strategy. IMBER Report No. 3, IOGOOS Report No. 7, SIBER Report No. 1, available in electronic format from: <http://www.imber.info/siber.html>.

Keller, D. P., and **R. R. Hood** (2011) Modeling the seasonal autochthonous sources of dissolved organic carbon and nitrogen in the upper Chesapeake Bay. *Ecological Modeling*, 222: 1139-1162.

Xu, J., W. Long, J. D. Wiggert, W. J. Lanerolle, C. W. Brown, R. Murtugudde, and **R. R. Hood** (2011) Climate forcing and salinity variability in the Chesapeake Bay, USA. *Estuaries and Coasts*, DOI: 10.1007/s12237-011-9423-5.

Keller, D. P., and **R. R. Hood** (2012) Comparative simulations of dissolved organic matter cycling in idealized oceanic, coastal, and estuarine surface waters. *Journal of Marine Systems*, 109-110: 109-128.

Salihoglu, B., S. Neuer, S. Painting, R. Murtugudde, E. E. Hofmann, J. H. Steele, **R. R. Hood**, L. Legendre, M. W. Lomas, J. Wiggert, S.-I. Ito, Z. Lachkar, J. Hunt, K. Drinkwater, and C. L. Sabine (2012) Bridging marine ecosystem and biogeochemistry research: Lessons and recommendations from comparative studies. *Journal of Marine Systems*, 109-110: 161-175.

Lee, D.-Y., D. P. Keller, B. C. Crump, and **R. R. Hood** (2012) Community metabolism and energy transfer in the Chesapeake Bay estuarine turbidity maximum. *Marine Ecology Progress Series*, 449: 65-82.

Hood, R. R., K. F. Drinkwater, and N. Mihalopoulos (2013) Large-scale regional comparisons of marine biogeochemistry and ecosystem processes – Research approaches and results. *Special Issue of Journal of Marine Systems*, **R. R. Hood**, K. F. Drinkwater and N. Mihalopoulos (eds.), pp. 1-176.

Hood, R. R., K. F. Drinkwater, and N. Mihalopoulos (2013) Introduction: Large-scale regional comparisons of marine biogeochemistry and ecosystem processes – Research approaches and results. *Journal of Marine Systems*, 109-110: 1-3.

Brown, C. W., **R. R. Hood**, W. Long, J. Jacobs, D. L. Ramers, C. Wazniak, J. D. Wiggert, R. Wood, and J. Xu (2013). Ecological forecasting in Chesapeake Bay: Using a mechanistic-empirical modeling approach. *Journal of Marine Systems*, in press.

Yoshikawa, C., V. J. Coles, **R. R. Hood**, D. G. Capone, and N. Yoshida (2013) Modeling how surface nitrogen fixation influences subsurface nutrient patterns in the North Atlantic. *Journal of Geophysical Research, Oceans*, in press.

McCreary, J. P., Z. Yu, **R. R. Hood**, et al. (2013) Dynamics of the Indian Ocean oxygen minimum zones. *Progress in Oceanography*, in press.

2. Submitted Papers and Other Submitted Publications.

Keller, D. P., D.-Y. Lee, and **R. R. Hood** (2013) Turbidity maximum entrapment of phytoplankton in Chesapeake Bay. *Estuaries and Coasts*, submitted.

- Wang, P., A. B. Burd, **R. R. Hood**, V. J. Coles, M. A. Moran and P. L. Yager (2013) Incorporating genomic and transcriptomic information into a simplified marine biogeochemical model. *Biogeosciences*, submitted.
- Paolisso, M., J. Trombley, **R. R. Hood** and K. G. Sellner (2013) Environmental models and public stakeholders in the Chesapeake Bay watershed. *Estuaries and Coasts*, submitted.
- Coles, V. J., M. T. Brooks, J. Hopkins, M. R. Stukel, P. L. Yager and **R. R. Hood** (2013) The pathways and properties of the Amazon River plume in the tropical North Atlantic Ocean. *Journal of Geophysical Research – Oceans*, submitted.
- Jacobs, J., M. Rhodes, C. W. Brown, **R. R. Hood**, A. Leight, W. Long, and R. Wood (2013) Modeling and forecasting the distribution of *Vibrio vulnificus* in Chesapeake Bay. *Applied and Environmental Microbiology*, submitted.
3. Other Publications (including edited books, monographs and special issues).
- Hood, R. R.**, and D. B. Olson (1998) Multispecies modeling in the North Atlantic Ocean. In: *Pelagic Biogeography ICoPB II*, Proceedings of the 2nd International Conference, The Netherlands, 9-14 July, 1995, Unesco, Paris, France.
- Hood, R. R.**, A. F. Michaels, and D. G. Capone (1999) Probing the enigma of marine nitrogen fixation. *U.S. JGOFS News*, **10**: 7-8.
- Hood, R. R.** (2001) Modeling biogeochemical cycles in the post-JGOFS era. *Oceanography*, **14**: 75.
- Hood, R. R.**, V. J. Coles, M. Pascual, and D. G. Capone (2001) Modeling Trichodesmium and nitrogen fixation in the Atlantic: JGOFS meets Biocomplexity. *U.S. JGOFS News*, **11**: 1-2, 11.
- Iglesias-Rodrigues, M. D., R. A. Armstrong, R. Feely, **R. Hood**, and J. Kleypas (2001) SMP workshop assesses role of calcification in ocean carbon cycle. *U.S. JGOFS News*, **11**: 9-10.
- Brown, C.W., **R. R. Hood**, Z. Li, M. B. Decker, T. Gross, J. Purcell and H. Wang (2002) Forecasting system predicts presence of sea nettles in Chesapeake Bay. *EOS*, **83**: 321, 325-326.
- North, E. W., **R. R. Hood**, S.-Y. Chao, and L. P. Sanford (2003) Retention of early-life stages and copepod prey in an estuarine nursery area: The influence of environmental variability. ICES CM/N:04 .
- North, E. W., **R. R. Hood**, S.-Y. Chao, and L. P. Sanford. 2003. Combining Eulerian and Lagrangian numerical approaches to investigate the influence of hydrodynamic variability on the transport of sediment and fish eggs. ICES CM/P:33.
- Zhang, X., **R. R. Hood**, M. R. Roman, P. M. Glibert, and D. K. Stoecker (2003) *Pfiesteria* population dynamics: A modeling study. In: Steidinger, K. A., Landsberg, J. H., Tomas, C. R., Vargo, G. A. (eds.), *Harmful Algae 2002*, Proceedings of the Xth International Conference on Harmful Algae, Florida Fish and Wildlife Conservation Commission and Intergovernmental Oceanographic Commission of UNESCO, pp. 528-530.

- Hood, R. R.** (2004) The need for interdisciplinary research in ocean science. *IPRC Climate*, **3(2)**: 12-13.
- North, E. W., **R. R. Hood**, L. Zhong, M. Li, and T. Gross (2005) The influence of mixing processes and behavior on larval transport and mortality estimates in a stratified wind- and tidally-forced system. *ICES Journal of Marine Science*, in press ICES CM/J:10/P:24.
- Hood, R. R.**, J. D. Wiggert, N. R. Bates and S. Seitzinger (2006) Carbon cycling and biogeochemical variability in the Indian Ocean. *CLIVAR Exchanges*, in press.
- North, E. W., J. H. Volstad, M. Christman, **R. R. Hood**, L. Zhong, Z. Schlag, T. F. Gross, D. Lewis, J. Dew, M. Li, J. L. Manuel, R. I. E. Newell, and V. S. Kennedy (2006). Linking larval transport and fisheries demographic models to study the influence of environmental variability and larval behavior on oyster populations. ICES CM 2006 O:11, 13 pp
- North, E. W., Z. Schlag, **R. R. Hood**, L. Zhong, M. Li, and T. Gross. 2006. Modeling dispersal of *Crassostrea ariakensis* oyster larvae in Chesapeake Bay. Final Report to Maryland Department of Natural Resources, July 31, 2006. 55 pp.
- Hood, R. R.**, and S. Wajih A. Naqvi (2006) SIBER Workshop, 3-6 October, Goa, India. *IMBER Update*, Issue No. 5 – December 2006.
- Hood, R. R.**, J. D. Wiggert, N. R. Bates, and S. Seitzinger (2006) Carbon cycling and biogeochemical variability in the Indian Ocean. *Clivar Exchanges*, 11(4), No. 39: 24-28.
- Hood, R. R.**, V. J. Coles, and T. F. Gross (2008) Marine Models. In: Sven Erik Jorgensen and Brian D. Fath (Editor-in-Chief), *Ecological Models Vol. [3] of Encyclopedia of Ecology*, 5 vols. pp. 2217-2225 Oxford: Elsevier.
- V. J. Coles, **Hood, R. R.**, T. F. Gross (2008) Hydrodynamic Models. In: Sven Erik Jorgensen and Brian D. Fath (Editor-in-Chief), *Ecological Models Vol. [3] of Encyclopedia of Ecology*, 5 vols., Oxford: Elsevier.
- Wiggert, J. D., **R. R. Hood**, S. W. A. Naqvi, K. H. Brink and S. L. Smith (2009) Introduction to Indian Ocean Biogeochemical Processes and Ecological Variability. In: *Indian Ocean Biogeochemical Processes and Ecological Variability*, J. D. Wiggert, R. R. Hood, S. W. A. Naqvi, K. H. Brink, S. L. Smith (eds.), AGU Monograph Series, American Geophysical Union, Washington, D.C.
- Wiggert, J. D., **R. R. Hood**, S. W. A. Naqvi, K. H. Brink and S. L. Smith (2009) Indian Ocean Biogeochemical Processes and Ecological Variability. AGU Monograph Series, American Geophysical Union, Washington, D.C.
- Jacobs, J., M. Rhodes, C. W. Brown, **R. R. Hood**, A. Leight, W. Long, and R. Wood (2010) Predicting the distribution of *Vibrio vulnificus* in Chesapeake Bay. NOAA Technical Memorandum, NOS NCCOS 112.
- Hood, R. R.**, R. Wood, D. Green, and X. Zhang (2010) Report of the special session of “Chesapeake Bay Ecological Forecasting: Moving ecosystem modeling from research to operation” of the 2010 Chesapeake Modeling Symposium. Special Report. NOAA NCCOS CCEHBR. Charleston, SC. 35 pp.
- Hood, R. R.**, J. Wiggert, and W. Naqvi (2010) Sustained Indian Ocean biogeochemical and ecological research SIBER has taken off! *IMBER Update*, Issue No. 15, September 2010.

Hood, R. R., J. D. Wiggert and S. W. A. Naqvi (2010) SIBER Sustained Indian Ocean Biogeochemistry and Ecosystem Research, a new basin-wide international program in the Indian Ocean. Ocean Carbon and Biogeochemistry News, Volume 3, Number 3, Fall 2010.

Hood, R. R., M. R. Landry, and D. Repeta (2010) IMBIZO II: JGOFS meets GLOBEC in Crete. Limnology and Oceanography Bulletin, Volume 19, Number 4, December 2010.

Hood, R., J. Wiggert, and W. Naqvi (2011) SIBER: A new basin-wide, international programme in the Indian Ocean. IMBER Newsletter, Issue No. 19, December 2011.

Hood, R., W. Yu, and Y. Masumoto (2011) SIBER and the Indian Ocean Panel (IOP): A unique interdisciplinary partnership. IMBER Newsletter, Issue No. 19, December 2011.

McCreary, J., **R. Hood**, and Z. Yu (2011) Modelling the Arabian Sea Oxygen Minimum Zone (ASOMZ). IMBER Newsletter, Issue No. 19, December 2011.

Wiggert, J. D., B. R. Subramaniam, U. S. Panda, S. Patra, and **R. R. Hood** (2011) SIBER Ecosystem Modelling Workshop at NIOT-Chennai. IMBER Newsletter, Issue No. 19, December 2011.

Hood, R., W. Yu, Y. Masumoto, J. Wiggert, W. Naqvi, J. McCreary, Z. Yu, and L. Beckley (2012) SIBER and IOP: Joint activities and science results. CLIVAR Exchanges, No. 57, Vol. 16, October 2011.

Hood, R. R., L. Beckley, J. Wiggert, and N. D'Adamo (2013) SIBER Meeting in Cape Town: Reaching out to the South African Research Community. SANCOR Newsletter, in press.

C. Contracts and Grants

1. Awarded (past)

"Individual based modeling of particles and pelagic organisms in Chesapeake Bay", National Science Foundation CAREER grant, 8/1996-8/00, no cost extended through 8/01, \$283,298, R. R. Hood (PI).

"Modeling N₂ and CO₂ fixation by the oceanic diazotrophic cyanobacterium, *Trichodesmium*", NASA, 10/97-9/00, no cost extended through 9/01, \$141,103, R. R. Hood (UMCES PI).

"Remote observations and modeling of phytoplankton in Chesapeake Bay", NASA, 9/97-8/2000, renewed for 1 year, through 9/2001, \$602,445, L. W. Harding (PI), R. R. Hood (co-PI).

"Assimilation modeling of planktonic processes in Chesapeake Bay with aircraft and satellite ocean color data", Maryland Sea Grant, 2/98-1/2000, \$108,812, L. W. Harding (PI) and R. R. Hood (co-PI).

"Toward a mechanistic understanding of outbreaks of *Pfiesteria* and related dinoflagellates", ECOHAB (Interagency), 9/98-8/2003, \$80,000 (R. Hood's component), R. R. Hood (co-PI).

- “Development, validation and improvement of a coupled biological/chemical/physical model for the Arabian Sea”, NSF, 3/99-2/2003, total multi-institution award \$565,000, R. R. Hood (HPL PI and project leader).
- “Modeling the effect of changes in turbidity on light available for submerged aquatic vegetation”, The Cooperative Institute for Estuarine and Environmental Technology (CICEET), 8/1999 – 7/2001, \$169,524, R. Newell (PI), E. Koch and R. R. Hood (co-PIs).
- “A community model for Chesapeake Bay”, CICEET, 9/01/2002 – 9/01/2004, \$196,073, M. Li (PI), R. R. Hood and B. Boicourt (Co-PIs).
- “How do estuarine turbidity maxima entrap particles, retain zooplankton, and promote recruitment of fish?”, NSF, 11/1/2000 – 11/1/2004, \$1,322,141, UMCES Component, E. D. Houde (PI), R. R. Hood et al. (Co-PIs).
- “Factors affecting, and impact of, diazotrophic microorganisms in the western equatorial Atlantic Ocean”, NSF Biocomplexity Phase I, 1/1/2000 – 1/1/2005, \$282,000, HPL Component, R. R. Hood (UMCES PI).
- “A partnership proposal: technology transfer of a larval dispersal model”, NOAA, 10/1/04 – 10/1/05, \$49,990, E. North (PI), R. R. Hood et al. (co-PIs).
- “Do oyster filtration and wave attenuation associated with oyster reefs and breakwaters improve seagrass habitat?”, Maryland Sea Grant, 2/1/2003 – 8/1/2006, no-cost extended to 8/1/2006, \$191,435, R. R. Hood (PI).
- “Modeling dispersal of *Crassostrea ariakensis* oyster larvae in Chesapeake Bay”, MD DNR, 02/23/04 – 9/1/05, no-cost ext. to 7/1/2006, \$99,885, E. North (PI), R. R. Hood, T. Gross and M. li (Co-PIs).
- “Modelling oysters: quantifying ecosystem services and enhancing restoration strategies”, Campbell Foundation, 5/1/04 – 9/1/05, no-cost ext. to 7/1/2006, \$43,078, E. North (PI), R. R. Hood (co-PI).
- “Quantification and modeling of DOC and DON release in marine systems: a study of increasing trophic complexity.”, NSF, 9/1/2002 – 9/1/2007, \$170,667 (UMCES Component), R. R. Hood (UMCES PI).
- “Biogeochemical observations and modeling in the Indian Ocean: Assessing the state of our understanding and planning for the future.” NSF OISE, 8/1/205 – 8/1/06, o-cost ext to 8/1/07, \$60,000, R. R. Hood (PI).
- “Development of an operational model for predicting the near real time distribution and abundance of the scyphomedusa, *Chrysaora quinquecirrha*, in Chesapeake Bay”, NOAA, 9/1/04 – 9/1/07, no-cost extension to 9/1/08, \$178,200, R. R. Hood (UMCES PI).
- “An adaptive food web model for the epipelagic and mesopelagic”, NSF (subcontract from LSU), 11/1/06 – 11/1/07, no cost ext. to 11/1/08, \$95,500, R. Hood (UMCES PI).
- “Assessing the impact and variability of coccolithophorid blooms in the ocean carbon cycle. NOAA, 2/1/05 – 7/1/09, no cost ext. to 7/1/10, \$258,531 (UMCES component), R. R. Hood (UMCES PI).
- “Dynamic stability and particle transformations: Tracing pathways of production in estuarine turbidity maxima”, NSF, 10/1/05 – 10/1/09, no cost ext. to 10/1/10, \$306,216 (Hood’s component), E. Houde (PI), R. R. Hood et al. (Co-PIs).

“Development and implementation of an operational harmful algal bloom prediction system for Chesapeake Bay”, NOAA, 8/1/05 – 8/1/10, no cost ext. to 8/1/11, \$360,814 (UMCES component), R. R. Hood (UMCES PI).

“Collaborative Research: Impacts of ocean physics on the Arabian Sea oxygen minimum zone”, NSF, \$75,776 (UMCES component), 10/1/07-10/1/10, no cost ext. to 10/1/11, R. R. Hood (UMCES PI).

“A super-regional testbed to improve models of environmental processes on the U.S. Atlantic and Gulf of Mexico coasts”, NOAA, \$72,310 (UMCES component), R. R. Hood (UMCES PI).

2. Awarded (current)

“Collaborative Research: Amazon influences on the Atlantic: CarbOn export from Nitrogen fixation by DiAtom Symbiosis (ANACONDAS)”, NSF, \$446,727 (UMCES component), 10/1/09-10/1/12, V. J. Coles and R. R. Hood (UMCES PIs).

“ROCA: River-Ocean Continuum of the Amazon”, Moore Foundation, \$275,164 (UMCES component), 1/8/10-7/8/12, V. J. Coles and R. R. Hood (UMCES PIs).

“UMCES contribution to the estuarine hypoxia component of the US IOOS coastal modeling testbed”, NOAA, \$40,000 (UMCES component), R. R. Hood (UMCES PI).

“CRC/CCMP Program Manager”, NOAA, \$29,438, 6/1/12-6/1/13, R. R. Hood (PI).

3. Pending

“Collaborative Research: From wetlands to estuaries to oceans: Filling the gap in understanding and predicting dissolved organic carbon and nitrogen dynamics”, NSF, \$431,767 (UMCES component), 1/1/13-1/1/16, R. R. Hood (UMCES PI).

“Collaborative Research: Understanding the impacts of behavior on gelatinous zooplankton distributions”, NSF, \$768,849, 2/1/13-2/1/16, R. R. Hood (PI).

“Collaborative Research – The changing Arctic marine food web from prokaryotes to people: Impacts of emerging new nitrogen and carbon cycle pathways in a warming climate”, NSF, \$439,785, 12/1/13-12/1/17, R. R. Hood (UMCES PI).

D. Recent Seminars, Presentations, Posters and Websites

1. Invited Seminars and Papers

Hood, R. R. (1996) Modeling the seasonal mixed layer and biological production cycles in the North Atlantic ocean. Chesapeake Biological Laboratory, May 8, 1996.

Hood, R. R., (1997) Modeling seasonal biogeochemical cycles in the North Atlantic ocean. Old Dominion University, April 14, 1997.

Hood, R. R. (1998) Individual based modeling of particles and pelagic organisms in Chesapeake Bay. University of Maryland Center for Environmental Science, Appalachian Laboratory, April 20, 1998.

- Hood, R. R.** (1998) Individual based modeling of particles and pelagic organisms in Chesapeake Bay. University of Delaware, College of Marine Studies, May 15, 1998.
- Hood, R. R.** (1998) The Chesapeake Bay: Physical, Chemical and Biological Cycles. In: The Oceans: Society and science. A public lectures series, NASA Goddard Space Flight Center.
- Hood, R. R.** (1999) Modeling Biogeochemical and N₂ Fixation Cycles at BATS. U. S. JGOFS Steering Committee Meeting, Boulder Colorado, March 24, 1999.
- Hood, R. R.** (2000) Probing the Enigma of Marine Nitrogen Fixation. Old Dominion University, Norfolk Virginia, October 26, 2000.
- Hood, R. R.** (2002) Modeling Trichodesmium and nitrogen fixation in the Atlantic, Lamont-Doherty Geological Observatory, Palisades New York, June 2002.
- Hood, R. R.** (2002) Recent advances and future challenges in open ocean modeling. U.S. JGOFS Ocean Time-Series Summit, Vancouver BC, 9-12 April.
- Hood, R. R.** (2003) Modeling Trichodesmium and nitrogen fixation in the Atlantic, University of Hawaii, Honolulu HI, March 20, 2003.
- Hood, R. R.** (2003) Modeling biogeochemical variability in the Arabian Sea: A story about great progress and challenges that remain. University of Hawaii, Honolulu HI, June, 2003.
- Hood, R. R.** (2003) Modeling biogeochemical variability in the Arabian Sea: A story about physical infidelity and its biological consequences, University of Maryland Center for Environmental Science, HPL, Cambridge MD, November, 2003.
- Hood, R. R.** (2004) Modeling the impact of Iron and phosphorus limitation on *Trichodesmium* growth and N₂-fixation in the Atlantic. University of Maryland, ESSIC, College Park MD, March 8, 2004.
- Hood, R. R.** and V. J. Coles (2004) Modeling the impact of Iron and phosphorus limitation on *Trichodesmium* growth and N₂-fixation in the Atlantic. Scripps Institution of Oceanography, San Diego, CA, July 24, 2004.
- Hood, R. R.** (2004) Modeling the impact of Iron and phosphorus limitation on *Trichodesmium* growth and N₂-fixation in the Atlantic. Old Dominion University Oceanography Department, March 25, 2004.
- Hood, R. R.** (2004) Modeling the impact of Iron and phosphorus limitation on *Trichodesmium* growth and N₂-fixation in the Atlantic. Chesapeake Biological Laboratory, October 7, 2004.
- Hood, R. R.** (2004) Jay McCreary's contributions to understanding biogeochemical variability in the Arabian Sea. Indian Ocean Modeling Workshop, special session on the contributions of Prof. McCreary, Honolulu, Hawaii, November 29, 2004.
- Hood, R. R., X. Zhang, and J. T. Anderson** (2005) Modeling Pfiesteria life cycle attributes and population dynamics. GEOHAB 2005, Open Science Meeting, HABs and Eutrophication, Baltimore Maryland, March 10, 2005.

- Tango, P., C. W. Brown, T. F. Gross, D. L. Ramers, **R. R. Hood** and B. D. Michael (2005) Assessing the validation of a preliminary *Karlodinium micrum* nowcast model system in Chesapeake Bay and its tributaries. GEOHAB 2005, Open Science Meeting, HABs and Eutrophication, Baltimore Maryland, March 10, 2005.
- Hood, R. R.** (2005) Modeling interannual variability in Sea Nettle (*Chrysaora quinquecirrha*) populations in Chesapeake Bay. Estuarine Research Federation Biannual Meeting, *Estuarine Interactions*, Norfolk, Virginia, October, 16-20, 2005.
- Wetzel, R., C. Madden, **R. Hood (presenter)**, and R. Latour (2005) Ecological and multispecies modeling for ecosystem based management. Estuarine Research Federation Biannual Meeting, *Estuarine Interactions*, Norfolk, Virginia, October, 16-20, 2005.
- Hood, R. R.** (2005) Modeling interannual variability in Sea Nettle (*Chrysaora quinquecirrha*) populations in Chesapeake Bay. University of Delaware Graduate College of Marine Studies, Lewes Delaware, October 25, 2005.
- Hood, R. R.** (2005) Modeling interannual variability in Sea Nettle (*Chrysaora quinquecirrha*) populations in Chesapeake Bay. IAN Symposium on Ecological Forecasting, Chesapeake Bay Program Offices, Annapolis MD, December 1, 2005.
- Hood, R. R.** (2005) Assessing the influence of *Trichodesmium* and nitrogen fixation on marine biogeochemical cycles in the Atlantic. Wenner-Gren Foundations International Symposium, "Marine cyanobacteria: evolution, function and genomes", Stockholm, August 24-27, 2005.
- Hood, R. R.**, and J. R. Christian (2005) Ocean N-cycle Modeling. Significant Processes, Observations and Transformations in Oceanic Nitrogen (SPOT-ON). Rostock-Warnemunde, Germany, June 26 – July 1st, 2005.
- Hood, R. R.** (2005) Assessing the influence of *Trichodesmium* and nitrogen fixation on marine biogeochemical cycles in the Atlantic. University of Hawaii, August 29, 2005.
- Hood, R. R.** (2006) Ocean biogeochemical modeling in the 21st century: Challenges and future prospects. MSRC, State University of New York, Stony Brook, April 21, 2006.
- Hood, R. R.** (2006) Ocean biogeochemical modeling in the 21st century: Challenges and future prospects. Appalachian Laboratory, University of Maryland Center for Environmental Science, November 30, 2006.
- Hood, R. R.** (2006) Ocean biogeochemical modeling in the 21st century: Challenges and future prospects. Horn Point Laboratory, University of Maryland Center for Environmental Science, December 6, 2006.
- Hood, R. R.** (2006) Ocean biogeochemical modeling in the 21st century: Challenges and future prospects. Chesapeake Biological Laboratory, University of Maryland Center for Environmental Science, December 12, 2006.
- Hood, R. R.** (2006) Ocean biogeochemical modeling in the 21st century: Challenges and future prospects. Chesapeake Biological Laboratory, University of Maryland Center for Environmental Science, December 12, 2006.
- Hood, R. R.** (2007) Ocean biogeochemical modeling: Progress, challenges and prospects. Invited paper, ASLO Aquatic Sciences Meeting, Santa Fe, NM, February, 4-9.

- Hood, R. R.** (2007) SIBER: Sustained Indian Ocean Biogeochemical and Ecological Research. Invited presentation, Indian Ocean Panel Meeting, Pretoria, South Africa, April, 23-25.
- Hood, R. R.** (2007) SIBER: Sustained Indian Ocean Biogeochemical and Ecological Research. Invited presentation, IOGOOSV meeting, Phuket, Thailand, December 4.
- Hood, R. R.,** V. J. Coles and D. G. Capone (2008) Modeling Nitrogen Fixation in the Atlantic Ocean. Invited presentation, ASLO/AGU/TOS Ocean Sciences Meeting, Orlando, FL, March 3-7.
- Keller, D. P. and **R. R. Hood** (2008) Elucidating carbon and nitrogen cycling in the upper Chesapeake Bay. Invited talk at the MEES 2008 Colloquium at Chesapeake Biological Laboratory, Solomons Island, MD, October 17-18.
- Hood, R. R.** (2008) SIBER: Sustained Indian Ocean Biogeochemistry and Ecosystem Research. Invited presentation, GLOBEC-IMBER Transition Task Team Meeting, Washington, DC, December 15.
- Hood, R. R.,** J. P. McCreary, Z. Xu and P. N. Vinayachandran (2009) Modeling the Oxygen Minimum Zone in the Arabian Sea. Invited presentation, CLIVAR Indian Ocean Panel Meeting VI, Reunion Island, June 3-5.
- Hood, R. R.,** and S. W. A. Naqvi (2009) SIBER: Sustained Indian Ocean Biogeochemistry and Ecosystem Research. Invited presentation, CLIVAR Indian Ocean Panel Meeting VI, Reunion Island, June 3-5.
- Hood, R. R.** (2010) SIBER: Sustained Indian Ocean Biogeochemistry and Ecosystem Research. Invited presentation, GLOBEC-IMBER SSC Meeting, Washington, DC, May 5-7.
- Hood, R. R.,** and S. W. A. Naqvi (2010) SIBER: Sustained Indian Ocean Biogeochemistry and Ecosystem Research. A new science alliance under IOGOOS and IMBER and vision for the future in the context of synergies with IOP and IRF. Invited plenary presentation, Joint SIBER/IOGOOS/IOP/IRF meeting, Perth Australia, July 12-16.
- Hood, R. R.,** and S. W. A. Naqvi (2010) SIBER: Sustained Indian Ocean Biogeochemistry and Ecosystem Research. Report to IOGOOS. Invited presentation, Joint SIBER/IOGOOS/IOP/IRF meeting, Perth Australia, July 12-16.
- Hood, R. R.** (2011) SIBER: Sustained Indian Ocean Biogeochemistry and Ecosystem Research. Invited presentation, IMBER SSC Meeting, Marseilles, France, April 11-13.
- Hood, R. R.** (2011) Introduction: Hydrodynamic Models. Invited presentation, CCMP Hydrodynamic Modeling Workshop, Edgewater Maryland, U.S.A, June 9-10.
- Hood, R. R.** (2011) Chesapeake Bay Program Overview and Management Issues – Integrated Models, research, Monitoring and Decision Making. Invited presentation, Ministry of Earth Sciences Workshop, Modeling and Prediction of Chilika Lagoon, August 1-2.
- Hood, R. R.** (2012) SIBER: Sustained Indian Ocean Biogeochemistry and Ecosystem Research. Invited presentation, IMBER SSC Meeting, La Paz, Mexico, June 12-15.
- Hood, R. R.** (2012) Decadal Climate Prediction and the Role of Ocean Biology in the Indian Ocean. Joint IMBER/CLIVAR Meeting, La Paz, Mexica, June 13.

Yu, Z., McCreary, J. P., **R. R. Hood**, P. Vinayachandran et al. (2012) Oxygen minimum zones in the northern Indian Ocean. AOGS-AGU Joint Assembly Meeting, Singapore, August 13-17.

Hood, R. R. (2012) Biogeochemical Impacts of Boundary Currents in the Indian Ocean, with Special Reference to the Agulhas System and the Madagascar Bloom. AGU Chapman Conference on the Agulhas System, Spier, South Africa, October 8-12.

Hood, R. R. (2010) University of Maryland Center for Environmental Science Organization and Research Activities, and Chesapeake Bay Management Modeling. Invited presentation, Tianjin University, Tianjin, China, December 26-30.

Hood, R. R., C. W. Brown, J. D. Wiggert, W. Long, J. Xu, R. Wood, J. Jacobs, M. B. Prasad, and L. W. Lanerolle (2012) Ecological Forecasting in Chesapeake Bay. Invited presentation, Tianjin University, Tianjin, China, December 26-30.

Hood, R. R. (2012) University of Maryland Center for Environmental Science Oyster Cultivation and Restoration Facility. Invited presentation, Tianjin University, Tianjin, China, December 26-30.

4. Contributed Papers and Posters

Hood, R. R., and D. B. Olson (1996) Modeling the seasonal mixed layer and biological Production cycles in the north Atlantic Ocean. *AGU Ocean Sciences*, 96, February 12-16, 1996, San Diego, California.

Hood, R. R., K. A. Maillet, and D. B. Olson (1997) Modelling air-sea CO₂ exchange in the North Atlantic Ocean. ASLO 97, Aquatic Sciences Meeting, February 10-14, 1997, Santa Fe, New Mexico.

Hood, R. R., H. V. Wang, and J. E. Purcell (1998) Individual based modeling of particles and pelagic organisms in Chesapeake Bay. *AGU Ocean Sciences*, 98, February 9-13, 1998, San Diego, California.

Hood, R. R., L. R. May, A. Subramaniam, E. J. Carpenter and D. G. Capone (1999) Modeling nitrogen and carbon fixation of *Trichodesmium*: Shipboard and remote sensing applications. ASLO 99, Aquatic Sciences Meeting, February 1-5, 1999, Santa Fe, New Mexico.

Kemp, W. M., M. T. Brooks, and **R. R. Hood** (*presenter*) (1999) Productivity, variability and trophic transfer efficiency in pelagic food webs. ASLO 99, Aquatic Sciences Meeting, February 1-5, 1999, Santa Fe, New Mexico.

Hood, R. R., N. R. Bates, D. G. Capone, and D. B. Olson (2000) Modeling seasonal and Interannual biogeochemical and N₂ –fixation cycles at BATS. *AGU Ocean Sciences*, January 24-28, 2000, San Antonio, Texas.

Coles, V. J., and **R. R. Hood** (2000) Modeling *Trichodesmium* and the impact of nitrogen fixation in the Atlantic Ocean. ASLO Aquatic Sciences, 2000, June 5-9, 2000, Copenhagen, Denmark.

- Anderson, J., D. Stoecker, **R. Hood**, and X. Zhang (2000) Quantification of life history transformation rates of non-toxic *Pfiesteria piscicida*. ASLO Aquatic Sciences, 2000, June 5-9, 2000, Copenhagen, Denmark.
- Hood, R.**, X. Zhang, and J. Anderson (2000) Numerical simulation of *Pfiesteria piscicida* population dynamics. ASLO Aquatic Sciences, 2000, June 5-9, 2000, Copenhagen, Denmark.
- Decker, M. B., J. E. Purcell, **R. R. Hood**, and C. W. Brown (2001) Defining the habitat of sea nettles (*Chrysaora quinquecirrha*) in Chesapeake Bay. 16th Biennial Conference of the Estuarine Research Federation, 2001, November 4-8, St. Pete Beach, Florida.
- Hood, R. R.**, M. Wood, E. Koch, and R. Newell (2001) Modeling the interaction between wave-induced sediment resuspension, bivalve filtration and seagrass growth. 16th Biennial Conference of the Estuarine Research Federation, 2001, November 4-8, St. Pete Beach, Florida.
- Newell, R. I. E., E. W. Koch, M. K. Wood, R. E. Grizzle, and **R. R. Hood** (2001) Linking bivalve filtration and seagrass growth via sediment dynamics and turbidity in shallow waters. 16th Biennial Conference of the Estuarine Research Federation, 2001, November 4-8, St. Pete Beach, Florida.
- Ammerman, J. W., D. A. Case, **R. R. Hood**, and J. B. Cotner (2002) Time series phosphorus measurements at BATS. U.S. JGOFS Ocean Time-Series Summit, Vancouver BC, 9-12 April.
- Li, Z, T. Gross, H. Wang, C. Brown, and **R. Hood** (2002) Validation and Application of a Near Real Time Nowcast System of Salinity and Temperature in Chesapeake Bay. 2002 AGU/ASLO Ocean Sciences Meeting, Honolulu, HI, 11-15 February.
- Pascual, M., V. J. Coles, **R. R. Hood**, and D. G. Capone (2002) Modeling Nitrogen Fixation in an Atlantic Coupled Ecosystem Ocean Circulation Model. 2002 AGU/ASLO Ocean Sciences Meeting, Honolulu, HI, 11-15 February.
- Finzi, J. A., J. A. Burns, A. Subramaniam, **R. R. Hood**, and D. G. Capone (2002) Light Dependent Carbon and Nitrogen Fixation Characteristics of *Trichodesmium*. 2002 AGU/ASLO Ocean Sciences Meeting, Honolulu, HI, 11-15 February.
- Friedrichs, M. A., **R. R. Hood**, and J. D. Wiggert (2002) The Arabian Sea Model Testbed: an Intercomparison of Data Assimilative Ecosystem Models. 2002 AGU/ASLO Ocean Sciences Meeting, Honolulu, HI, 11-15 February.
- Hood, R. R.**, K. E. Kohler, J. P. McCreary, and S. L. Smith (2002) A 4-Dimensional Validation of a Coupled Physical-Biological Model of the Arabian Sea. 2002 AGU/ASLO Ocean Sciences Meeting, Honolulu, HI, 11-15 February.
- North, E. W., **R. R. Hood**, S.-Y. Chao, and L. P. Sanford (2003) Using a random displacement model to simulate turbulent particle motion in a baroclinic frontal zone: A new implementation scheme and model performance tests. 2004 ICES meeting, Barcelona, Spain, 8-12, March.
- Friedrichs, A. M., **R. R. Hood**, and J. D. Wiggert (2003) Ecosystem model comparison in the Arabian Sea: A prototype regional modeling testbed. JGOFS Final Open Science Conference, 5-8 May, Washington DC.

- Friedrichs, A. M., **R. R. Hood** et al. (2003) The regional ecosystem modeling testbed project. JGOFS Final Open Science Conference, 5-8 May, Washington DC.
- Hood, R. R.**, and K. Sellner (2003) Exposing your code: Open source modeling and the Chesapeake Bay community modeling program. 2003 Biennial ERF Conference, "Estuaries on the Edge", Seattle WA, 14-18, September.
- North, E. W., **R. R. Hood**, S.-Y. Chao, and L. P. Sanford (2003) Linking biology and physics in An ETM: The effect of freshwater flow and wind on retention of fish early-life stages. 2003 Biennial ERF Conference, "Estuaries on the Edge", Seattle WA, 14-18, September.
- Hood, R. R.**, K. E. Kohler, J. P. McCreary, and S. L. Smith (2004) A 4-Dimensional Validation of a Coupled Physical-Biological Model of the Arabian Sea. 2004 AGU Ocean Sciences Meeting, Portland Or, 26-30, January.
- Hood, R. R.** (2004) Modeling the impact of Iron and phosphorus limitation on *Trichodesmium* growth in the Atlantic. 2004 ASLO/TOS Ocean Sciences Meeting, Honolulu HI, 16-20, February.
- Coles, V. J., C. Wilson, and **R. R. Hood** (2004) Remote sensing of new production fueled by nitrogen fixation. 2004 AGU Ocean Sciences Meeting, Portland Or, 26-30, January.
- Finzi, J. A., J. A. Burns, A. Subramaniam, **R. R. Hood** and D. G. Capone (2004) Nitrogen fixation and photosynthetic parameters of *Trichodesmium* spp. In the subtropical North Pacific. 2004 ASLO/TOS Ocean Sciences Meeting, Honolulu HI, 16-20, February.
- Hood, R. R.**, V. J. Coles, and D. G. Capone (2005) Modeling the influence of nitrogen fixation on marine biogeochemical cycles in the Atlantic Ocean. 2005 ASLO Aquatic Sciences meeting, Salt Lake City, Utah, 20-25, February.
- North, E. W., **R. R. Hood**, T. F. Gross, L. Zhong, M. Li, J. L. Manuel, R. I. Newell, V. S. Kennedy (2005) Towards predicting oyster recruitment in Chesapeake Bay: the influence of environmental variability and larval behavior on transport and settlement. Estuarine Research Federation Biannual Meeting, *Estuarine Interactions*, Norfolk, Virginia, October, 16-20, 2005.
- Keller, D., and **R. R. Hood** (2005) Modeling the sources, sinks and transformations of dissolved organic nitrogen in estuarine and coastal waters. Estuarine Research Federation Biannual Meeting, *Estuarine Interactions*, Norfolk, Virginia, October, 16-20, 2005.
- Williams, M. R., T. R. Fisher, C. F. Cerco, W. R. Boynton, M. W. Kemp, K. N. Eshleman, **R. R. Hood**, S. C. Kim, S. E. Greene, G. Radcliffe (2005) Effects of tidal marshes on the biogeochemistry of low-salinity estuarine regions: inferences from numerical modeling. Estuarine Research Federation Biannual Meeting, *Estuarine Interactions*, Norfolk, Virginia, October, 16-20, 2005.
- Decker, M. B., **R. R. Hood**, C. W. Brown, J. E. Purcell, T. F. Gross (2005) Development of habitat models for predicting the abundance and distribution of Chesapeake Bay jellyfish (*Chrysaora quinquecirrha*) Estuarine Research Federation Biannual Meeting, *Estuarine Interactions*, Norfolk, Virginia, October, 16-20, 2005.
- Brown, C. W., D. L. Ramers, T. F. Gross, **R. R. Hood**, P. J. Tango (2005) Nowcasting the relative abundance of the ichthyotoxic dinoflagellate *Karlodinium micrum* in Chesapeake Bay. Estuarine Research Federation Biannual Meeting, *Estuarine Interactions*, Norfolk, Virginia, October, 16-20, 2005.

- Gross, T. F., and **R. R. Hood** (2005) Building a Chesapeake Research Community through open source modeling. Estuarine Research Federation Biannual Meeting, *Estuarine Interactions*, Norfolk, Virginia, October, 16-20, 2005.
- North, E. W., S. Chen, **R. R. Hood**, F. Shi, L. P. Sanford, J. T. Kirby, E. W. Koch, R. I. Newell (2005) Understanding the effects of oyster reefs and breakwaters on seagrass habitat: an open-source modeling approach. Estuarine Research Federation Biannual Meeting, *Estuarine Interactions*, Norfolk, Virginia, October, 16-20, 2005.
- Xu, J., and **R. R. Hood** (2005) Modeling biogeochemical cycles in Chesapeake Bay with a coupled physical-biological model of Chesapeake Bay: development, validation and improvement. Estuarine Research Federation Biannual Meeting, *Estuarine Interactions*, Norfolk, Virginia, October, 16-20, 2005.
- Li, M., L. Zhong, **R. R. Hood**, and L. W. Harding (2005) Simulating seasonal and interannual variations of plankton populations in the Chesapeake Bay using a new biophysical model. Estuarine Research Federation Biannual Meeting, *Estuarine Interactions*, Norfolk, Virginia, October, 16-20, 2005.
- Hood, R. R.**, C. W. Brown, T. F. Gross, M. B. Decker, and J. E. Purcell (2005) Modeling interannual variability in sea nettle (*Chrysaora quinquecirrha*) populations in Chesapeake Bay. Estuarine Research Federation Biannual Meeting, *Estuarine Interactions*, Norfolk, Virginia, October, 16-20, 2005.
- Lanerolle, L., T. Gross, **R. Hood**, and J. Xu (2005) Coupled high resolution ROMS applications for simulation of hypoxic zones in the Chesapeake Bay. Estuarine Research Federation Biannual Meeting, *Estuarine Interactions*, Norfolk, Virginia, October, 16-20, 2005.
- Hood, R. R.**, J. D. Wiggert, J. McCreary, R. G. Murtugudde, and P. N. Vinayachandran (2006) The Indian Ocean: recent discoveries, links to global climate, atmosphere-ocean interaction and biogeochemical response. AGU/ASLO/TOS Ocean Sciences meeting, Honolulu, HI, February, 20-24, 2006.
- Wiggert, J. D., R. G. Murtugudde and **R. R. Hood** (2006) The influence of inter-regional connections on seasonal to interannual biogeochemical variability in the Indian Ocean. AGU/ASLO/TOS Ocean Sciences meeting, Honolulu, HI, February, 20-24, 2006.
- Vinayachandran, P., J. P. McCreary Jr., **R. R. Hood** and K. E. Kohler (2006) Phytoplankton bloom in the Bay of Bengal during northeast monsoon: Satellite observations and numerical modeling. AGU/ASLO/TOS Ocean Sciences meeting, Honolulu, HI, February, 20-24, 2006.
- Coles, V. J., and **R. R. Hood** (2006) Atmospheric dust deposition variability and Atlantic nitrogen fixation. AGU/ASLO/TOS Ocean Sciences meeting, Honolulu, HI, February, 20-24, 2006.
- Brown, C. W., T. F. Gross, **R. R. Hood**, D. L. Ramers, P. J. Tango, and B. D. Michael (2006) Implementation of an operational harmful algal bloom prediction system in Chesapeake Bay. ASLO Summer Meeting, Victoria BC, Canada, June 4-9, 2006.
- Ramers, D. L., C. W. Brown, T. F. Gross, **R. R. Hood**, P. J. Tango and B. D. Michael (2006) Predicting the abundance of the dinoflagellate *Karlodinium micrum* in Chesapeake Bay using an artificial neural network. ASLO Summer Meeting, Victoria BC, Canada, June 4-9, 2006.

- North, E. W., **R. R. Hood**, M. Li, L. Zhong, T. Gross, J. L. Manuel, R. I. Newell, V. S. Kennedy, and Z. Schlag (2006) The influence of environmental variability and settlement habitat on the dispersal of oyster larvae in Chesapeake Bay. ASLO Summer Meeting, Victoria BC, Canada, June 4-9, 2006.
- Xu, J., E. W. North, **R. R. Hood** and R. I. Newell (2006) Quantifying the role of oysters in restoring water quality in Chesapeake Bay: Toward a potential management tool for oyster restoration. ASLO Summer Meeting, Victoria BC, Canada, June 4-9, 2006.
- Hood, R.**, D. Keller, D. Lee and B. Crump (2007) Primary Production in the Chesapeake Bay ETM: Rates, Sources and Contribution to Higher Trophic Level Production. ERF 2007, November 4-8.
- Lee, D., **R. Hood**, and B. Crump (2007) Community Metabolism of Estuarine Turbidity Maximum in Chesapeake Bay: Primary Production, Respiration, and Size-Fractionated Respiration. ERF 2007, November 4-8.
- Long, W., J. Xu, L. Lanerolle, **R. Hood**, T. Gross, J. Wiggert, R. Murtugudde, C. Brown (2007) Internal Variability of the Chesapeake Bay Physics. ERF 2007, November 4-8.
- North, E., E. Houde, S. Chao, B. Crump, C. Friedrichs, **R. Hood**, D. Kimmel, E. Martino, M. Roman, J. Pierson, L. Sanford (2007) A Synthesis of Biological-Physical Interactions in the Chesapeake Bay Estuarine Turbidity Maximum. ERF 2007, November 4-8.
- Pierson, J., M. Roman, D. Kimmel, **R. Hood**, B. Crump, D. Keller, M. Malpezzi (2007) Winter Zooplankton Abundance, Distribution, and Vital Rates in the Chesapeake Bay Estuarine Turbidity Maximum. ERF 2007, November 4-8.
- Sexton, M., **R. Hood**, M. Decker (2007) Sea Nettle *Chrysaora quinquecirrha* in Chesapeake Bay: Factors Influencing Disappearance and Variability. ERF 2007, November 4-8.
- Xu, J., W. Long, W., L. Lanerolle, **R. Hood**, T. Gross, C. Brown, R. Murtugudde, J. Wiggert (2007) Studying the Interannual Variability in the Chesapeake Bay using the ChesROMS Community Model. ERF 2007, November 4-8.
- Coles, V. J., **R. R. Hood**, C. W. Brown (2008) Modeling Coccolithophorid Calcification in the North Atlantic, ASLO/AGU/TOS Ocean Sciences Meeting, Orlando, FL, March 3-7.
- Long, W., J. Xu, L. Lanerolle, **R. R. Hood**, T. F. Gross, J. D. Wiggert, R. G. Murtugudde, C. W. Brown (2008) CHESROMS: Operational Modeling of Chesapeake Bay Physics and Ecology. ASLO/AGU/TOS Ocean Sciences Meeting, Orlando, FL, March 3-7.
- Wiggert, J. D., J. Xu, W. Long, L. Lanerolle, **R. R. Hood**, C. W. Brown (2008) Seasonal Variability of Biogeochemical Properties and Water Quality Within a Coupled Model of Chesapeake Bay. ASLO/AGU/TOS Ocean Sciences Meeting, Orlando, FL, March 3-7.
- Sarkodee-Adoo, J., **R. R. Hood**, M. Sexton (2008) The Effects of Temperature on Scyphomedusan *Chrysaora quinquecirrha* Swimming and Mortality. ASLO/AGU/TOS Ocean Sciences Meeting, Orlando, FL, March 3-7.

- Hood, R.**, W. Long, J. Xu, J. Wiggert, L. Lanerolle, T. Gross, and C. Brown (2008) The ChesROMS Community Model. CCMP CheMS08 Symposium, Annapolis, MD, May 12-14.
- Long, W., **R. Hood**, J. Xu, J. Wiggert, L. Lanerolle, T. Gross, R. Murtugudde and C. Brown (2008) Chesapeake Bay Regional Ocean Modeling System (ChesROMS). CCMP CheMS08 Symposium, Annapolis, MD, May 12-14.
- Wiggert, J., J. Xu, W. Long, L. W. J. Lanerolle, **R. Hood** and C. W. Brown (2008) Seasonal variability of biogeochemical processes within a coupled model of Chesapeake Bay. Poster presentation, CCMP CheMS08 Symposium, Annapolis, MD, May 12-14.
- Keller, D. P. and **R. R. Hood** (2008) Modeling the transfer of energy between different trophic levels in the Chesapeake Bay estuarine turbidity maximum. Poster presentation at the Advances in Marine Modelling Research (AMEMR) 2008 conference in Plymouth, UK, 23-26 June, 23-26.
- Sexton, M. A., **R. R. Hood**, J. Sarkodee-Adoo, and A. M. Liss (2009) Response of sea nettle *Chrysaora quinquecirrha* to low temperature. ASLO Aquatic Sciences Meeting, Nice France, January 25-30.
- Hood, R. R.**, D. P. Keller and D.-Y. Lee (2009) Phytoplankton production, respiration and species composition patterns in the Chesapeake Bay ETM. CERF 2009 Conference, Portland Oregon, November 1-5.
- Lee, D.-Y., **R. Hood**, D. Keller and B. Crump (2009) Assessing the role of dinoflagellates in the Chesapeake Bay turbidity maximum area. CERF 2009 Conference, Portland Oregon, November 1-5. *Best Student Poster Award*.
- Wiggert, J., W. Long, B. K. P. Mathukamali, J. Xu, L. W. Lanerolle, C. W. Brown and **R. R. Hood** (2009) Simulation of seasonal bloom dynamics and hypoxia onset using a coupled physical-biogeochemical model of Chesapeake Bay. CERF 2009 Conference, Portland Oregon, November 1-5.
- Sexton, M., **R. Hood**, J. Sarkodee-Adoo, and A. M. Liss (2009) Factors that influence the timing and intensity of the annual bloom of the sea nettle (*Chrysaora quinquecirrha*). CERF 2009 Conference, Portland Oregon, November 1-5.
- Pierson, J., M. Roman, D. Kimmel, **R. Hood**, B. Crump, D. Keller, D.-Y. Lee, and M. Malpezzi (2009) Estimates of winter zooplankton production in the Chesapeake Bay estuarine turbidity maximum. CERF 2009 Conference, Portland Oregon, November 1-5.
- Keller, D., and **R. Hood** (2009) Modeling the seasonal cycle of dissolved organic carbon and nitrogen at station CB3.3C in the upper Chesapeake Bay, USA. CERF 2009 Conference, Portland Oregon, November 1-5.
- Coles, V. J., **R. R. Hood** and C. Brown (2010) North Atlantic variability in coccolithophorid distribution from satellites and a model: Physical drivers and biogeochemical response. Ocean Sciences 2010 Conference, Portland Oregon, February 22-26.
- Yoshikawa, C., V. J. Coles, **R. R. Hood** and N. Yoshida (2010) The nitrogen fixation and N* anomaly patterns in the Atlantic Ocean. Ocean Sciences 2010 Conference, Portland Oregon, February 22-26.

McCreary, J. P., Z. Yu, **R. R. Hood** and P. Vinayachandran (2010) Modeling the formation of the Arabian Sea and Bay of Bengal oxygen minimum zones. Ocean Sciences 2010 Conference, Portland Oregon, February 22-26.

Hood, R. R., S. W. A. Naqvi, and J. D. Wiggert (2010) SIBER: Sustained Indian Ocean Biogeochemistry and Ecosystem Research. Poster presentation, IMBER IMBIZO II meeting, Crete, Greece, October 11-14.

Wiggert, J. D., W. Long, J. Xu, **R. R. Hood**, B. K. Mathukumalli, L. W. Lanerolle, and C. W. Brown (2011) Assessment of a coupled physical-biogeochemical model developed for water quality and ecological forecast use in Chesapeake Bay. ASLO Aquatic Sciences Meeting, San Juan, Puerto Rico, February 13-18.

Brown, C. W., **R. R. Hood**, W. Long, D. L. Ramers, C. Wazniak, J. Wiggert, R. Murtugudde, M. B. Decker, and D. Wilson (2011) Development of a Chesapeake Bay ecological prediction system. ASLO Aquatic Sciences Meeting, San Juan, Puerto Rico, February 13-18.

Hood, R. R., C. W. Brown, J. D. Wiggert, W. Long, J. Xu, R. Wood, J. Jacobs, M. B. Prasad, and L. W. Lanerolle (2011) CBEPS: The Chesapeake Bay ecological prediction system (The ChesROMS model and sea nettle ecological nowcasts/forecasts). ASLO Aquatic Sciences Meeting, San Juan, Puerto Rico, February 13-18.

Jacobs, J. M., C. Brown, R. Colwell, D. Green, **R. Hood**, W. Long, G. Constantin de Magny, B. Krishna Prasad Mathukumalli, R. Murtugudde, M. Rhodes, and B. Wood (2011). The Chesapeake Bay Vibrio spp. forecast system. ASLO Aquatic Sciences Meeting, San Juan, Puerto Rico, February 13-18.

Sexton, M. A., and **R. R. Hood** (2011) The use of visual counts for measuring medusa abundance. ASLO Aquatic Sciences Meeting, San Juan, Puerto Rico, February 13-18.

Hood, R. R. (2011) SIBER UPDATE: Efforts to deploy biogeochemical sensors in the Indian Ocean: Progress since SIBER-1. Joint SIBER/IOP/IRF meeting, Chennai, Indian, July 25-29.

Hood, R. R. (2011) SIBER SCIENCE PLAN REVIEW: Overview of the SIBER Science Plan, formatted and printed version, research themes, working groups, implementation plan, timeline, etc. Joint SIBER/IOP/IRF meeting, Chennai, Indian, July 25-29.

Coles, V. J., M. T. Brooks, **R. R. Hood**, J. P. Montoya, M. R. Stukel, and P. L. Yager (2012) The role of the Amazon River plume in structuring upper ocean stratification, biochemistry, and biological communities in the western tropical North Atlantic. Ocean Sciences 2012 Conference, Salt Lake City, Utah, February 20-24.

Brooks, M. T., V. J. Coles, M. R. Stukel, **R. R. Hood** (2012) Modeling the Amazon River plume. Ocean Sciences 2012 Conference, Salt Lake City, Utah, February 20-24.

Hood, R. R., V. J. Coles, M. T. Brooks, M. R. Stukel (2012) Emergent microbial community structure and biogeochemical cycling in the Amazon River and plume. Ocean Sciences 2012 Conference, Salt Lake City, Utah, February 20-24.

Yu, Z., McCreary, J. P., **R. R. Hood**, P. Vinayachandran et al. (2012) Modeling the formation of the Arabian Sea and Bay of Bengal oxygen minimum zones. Ocean Sciences 2012 Conference, Salt Lake City, Utah, February 20-24.

2. Web sites

Kohler, K. E., **R. R. Hood**, and J. P. McCreary (2000) Arabian Sea Test Bed for 1-Dimensional Biological Models: <http://www.nova.edu/ocean/arabsea/testbed/testbed.html>

Brown, C. et al. (2000) Mapping Sea Nettles in Chesapeake Bay:
<http://155.206.18.162/seanettles/>

Brown, C. et al. (2000) Mapping Harmful Algal Blooms in Chesapeake Bay:
http://155.206.18.162/cbay_hab/

Brown, C. et al. (2000) Mapping Pathogens in Chesapeake Bay:
<http://155.206.18.162/pathogens/>

Friedrichs, M. A. M., **R. R. Hood**, et al. (2003) US JGOFS Regional Ecosystem Testbed Project: <http://www.ccpo.odu.edu/TESTBED>

Coles, V. J., A. G. Willey and **R. R. Hood** (2006) Oceanography at the University of System of Maryland: <http://ocean.umd.edu>

Hood, R. R., J. D. Wiggert and S. W. A. Naqvi (2010) SIBER Sustained Indian Ocean Biogeochemical and Ecosystem Research:
<http://www.imber.info/index.php/Science/Regional-Programmes/SIBER>

Prakash, S., **R. R. Hood**, J. D. Wiggert and S. W. A. Naqvi (2011) SIBER Sustained Indian Ocean Biogeochemical and Ecosystem Research:
<http://www.incois.gov.in/Incois/siber/siber.jsp>

F. Active Memberships in Professional Societies

American Society of Limnology and Oceanography
American Geophysical Union
Coastal and Estuarine Research Federation

IV. TEACHING AND TRAINING

1996- Affiliate Member, UMCES Graduate Faculty, Horn Point Laboratory
1996- Associate Member, UMCP Graduate Faculty

A. University System of Maryland Courses Taught

Course No. No Lectures	Title	Institution	Semester	Enrolment	Credit Hrs.	Co-Instructors
MEES 621 2 sessions	<i>Biological Oceanography</i>	UM/MEES	Spring 1996	21	3	Fisher, Stoecker
MEES 621 12 sessions	<i>Biological Oceanography</i>	UM/MEES	Spring 1997	17	3	Stoecker, Koch
MEES 621 12 sessions*	<i>Biological Oceanography</i>	UM/MEES	Spring 1998	21	3	Stoecker, Koch
MEES 621 12 sessions*	<i>Biological Oceanography</i>	UM/MEES	Spring 1999	13	3	Stoecker, Koch

MEES 621 <i>Biological Oceanography</i> 13.5 sessions*	UM/MEES	Spring 2000	18	3	Stoecker, Koch Kennedy
MEES 621 <i>Biological Oceanography</i> 13.5 sessions*	UM/MEES	Spring 2001	10	3	Stoecker, Koch Kennedy
MEES 621 <i>Biological Oceanography</i> 13.5 sessions*	UM/MEES	Spring 2002	20	3	Stoecker, Koch Kennedy
MEES 621 <i>Biological Oceanography</i> 11 sessions* ζ	UM/MEES	Fall 2003	32	3	Stoecker, Koch, Kennedy
MEES 621 <i>Biological Oceanography</i> 11 sessions* ζ	UM/MEES	Fall 2004	11	3	Stoecker, Koch, Kennedy
MEES 621 <i>Biological Oceanography</i> 11 sessions* ζ	UM/MEES	Fall 2005	7	4	Stoecker, Koch, Kennedy
MEES 621 <i>Biological Oceanography</i> 11 sessions* ζ	UM/MEES	Fall 2006	11	4	Stoecker, Koch, Kennedy
MEES 621 <i>Biological Oceanography</i> 12 sessions* ζ	UM/MEES	Fall 2007	8	4	Stoecker, Koch, Kennedy
MEES 621 <i>Biological Oceanography</i> 11 sessions* ζ	UM/MEES	Fall 2008	11	4	Stoecker, Koch, Kennedy
MEES 621 <i>Biological Oceanography</i> 11 sessions* ζ	UM/MEES	Fall 2009	10	4	O'Neil, Koch, Kennedy
MEES 621 <i>Biological Oceanography</i> 10 sessions* ζ	UM/MEES	Fall 2010	16	4	O'Neil, Koch, Kennedy
MEES 621 <i>Biological Oceanography</i> 10 sessions* ζ	UM/MEES	Fall 2011	15	4	O'Neil, Koch, Kennedy
MEES 621 <i>Biological Oceanography</i> (remote participation and grading)	UM/MEES	Fall 2012	8	4	O'Neil, Koch, Kennedy
MEES 608I <i>Essential Papers on the</i> 15 sessions* <i>Chesapeake Bay and Its Watershed</i>	UM/MEES	Fall 1996	18	1	
MEES 698B <i>Biological Oceanographic</i> 2 sessions* <i>Methods</i>	UM/MEES	Spring 1999	4	1	Stoecker, Koch, Kennedy Kana, Roman, Miller
MEES 698B <i>Biological Oceanographic</i> 2 sessions* <i>Methods</i>	UM/MEES	Spring 2000	4	1	Stoecker, Koch, Kennedy Miller
MEES 698B <i>Biological Oceanographic</i> 2 sessions* <i>Methods</i>	UM/MEES	Spring 2001	3	1	Stoecker, Koch, Kennedy Miller
MEES 698B <i>Biological Oceanographic</i> 2 sessions* <i>Methods</i>	UM/MEES	Spring 2002	7	1	Stoecker, Koch, Kennedy Miller

* Lead Instructor (organized course and responsible for grades)

ζ Also led 1 full day field trip/plankton cruise and organized/scheduled two additional lab module components for this course

B. Graduate Students Supervised as Major Advisor

1. REU Students Supervised (past)

Heather Stickney, numerical modeling, summer 1999

Rebecca Owens, sea nettle observational studies, summer 2002

Judith Sarkodee-Adoo, sea nettle observational studies, summer 2007

Amanda Liss, sea nettle observational studies, summer 2008

Jonny Diehl, sea nettle observational studies, summer 2010

2. Graduate Students Supervised (past)

Joseph Matanoski, Ph.D. Biological Oceanography, MEES, Horn Point Laboratory, swimming behavior of gelatinous zooplankton. **R. R. Hood, Committee Chairman, Defended Fall Semester, 2004.**

Jiangtao Xu, Ph.D., Physical Oceanography, MEES, Horn Point Laboratory, Chesapeake Bay biogeochemical modeling. **R. R. Hood, Committee co-Chairman and lead advisor** with S.-Y. Chao, *Defended Fall Semester, 2004.*

Jon Anderson, Ph.D., Ecology, MEES, Horn Point Laboratory, ecosystem modeling and Mixotrophy, **R. R. Hood, Committee Chairman, Graduated Fall Semester, 2001.**

Maureen Brooks, M.S., Ecology, MEES, Horn Point Laboratory, ecosystem modeling and trophic transfer efficiency, **R. R. Hood, Committee co-Chairman** with Michael Kemp, *Graduated Spring Semester, 2003.*

David Keller, Ph.D., Biological Oceanography, MEES, Horn Point Laboratory, DOM cycling and modeling, **R. R. Hood, Committee Chairman, Graduated Fall Semester, 2010.**

Daniel Lee, M.S., Biological Oceanography, MEES, Horn Point Laboratory, Oxygen and community metabolism in the Estuarine Turbidity Maximum, **R. R. Hood, Committee chairman. Graduated Fall Semester, 2010.**

Margaret Sexton, Ph. D. Biological Oceanography, MEES, Horn Point Laboratory, Factors influencing Sea Nettle (*Chrysaora quinquecirrha*) in Chesapeake Bay. **R. R. Hood, Committee Chairman. Graduated Fall Semester, 2012.**

3. Graduate Students Supervised (present)

Jacqueline Tay, Ph. D. Biological Oceanography, MEES, Horn Point Laboratory, Factors influencing Sea Nettle (*Chrysaora quinquecirrha*) in Chesapeake Bay. **R. R. Hood, Committee Chairman.**

Timothy Wynne, Ph. D. Biological Oceanography, MEES, Horn Point Laboratory, Remote Sensing of Amazon and Mississippi River Influences. **R. R. Hood, Committee Chairman.**

Hao Wang, Ph. D. Biological Oceanography, MEES, Horn Point Laboratory, Biogeochemical Modeling in Chesapeake Bay, **R. R. Hood, Committee Chairman.**

Long Jiang, Ph.D. Biological Oceanography, MEES, University of Maryland Eastern Shore, Biogeochemical Modeling in Chesapeake Bay, **R. R. Hood, Committee Co-Chairman** with Meng Xia.

4. Graduate Student Committees (past)

Gabriela Smalley, Ph.D., MEES, HPL
Ying Chen, Ph.D., MEES, CBL
Lori Roth, M.S., MEES, CBL
Shih-nan Chen, MEES, HPL
David Miller, Ph.D., MEES, HPL

David Sheurer, Ph.D., MEES, AL
Jennifer Massagli, Comp. Examination Committee, Biology Department, UMCP
Edward Martino, Ph.D., MEES, CBL
Ji Li, Ph.D., MEES, HPL (resigned from committee)
Ryan Woodland, Ph.D., MEES, CBL
Michael Malpezzi, M.S., MEES, HPL
Caroline Fortunato, Ph.D., MEES, HPL

5. Graduate Student Committees (present)

Kristi Shaw, Ph.D., MEES, HPL
Andrew Leight, Ph.D., MEES, HPL
Daniel Lee, Ph.D., MEES, HPL
Kelly Haisfield, M.S., UMCP, non-thesis masters, external reviewer

6. Postdocs advised (past)

Xinsheng Zhang, HAB modeling (1998-2000, co-advisor with M. Roman)
Elizabeth North, ETM and particle transport modeling (2001 – 2004)
Jiangtao Xu, Oyster filtration modeling and Estuarine Physical Modeling (2005 – 2007)
Jerry Wiggert, Estuarine biogeochemical modeling (2007)
Chisato Yoshikawa, Basin-scale biogeochemical modeling (2007-2008)
Zhi-Ping Mei, Amazon River microbial community modeling (2010 – 2011)
Wen Long, Estuarine physical and biogeochemical modeling (2005 – 2011)

7. Postdocs advised (present)

Michael Stukel, Amazon River and tropical biogeochemical Modeling (2011 – present)

V. OUTREACH AND SERVICE

A. Editorships and Journal Service

Typically Review ~5 papers per year for Journals including:

Journal of Geophysical Research

Estuaries and Coasts

Deep-Sea Research

Limnology and Oceanography

Marine Ecology Progress Series

Global Biogeochemical Cycles

Biogeosciences

Journal of Marine Systems

Progress in Oceanography

B. Public Service and Outreach

- Presentations to the following groups on HPL research activities:
- Senator Barbara Mikulski's staff, 1997
- Dorchester County Americans for the Competitive Enterprise System, 1997/98/99.
- Senior Lawyers of the Maryland State Bar Association, 1997
- Research Education for Undergraduates HPL Summer Program, 1996/97/98/99
- Maryland Space Grant Consortium, Earth Observations from Space Course, 1998

- HPL Env. Edu. Workshop for Eastern Shore High School Teachers, 1999
- Governor's Special assistant for assessment of Maryland technology resources, 2000
- Sandy Hill Elementary School, 1st Grade Class, Spring 2001.
- Society for Environmental Journalists, Baltimore MD., Fall 2002
- CRC Virginia-Maryland Natural Resources Colloquium, Fairfax Co., VA., Fall 2002
- Initiated and chaired the HPL/UMCES Christmas Float committee, Fall 2002
- Interview for Virginia Newspaper on Sea Nettle Nowcasting project, Summer, 2003
- Chair HPL/UMCES Christmas Float committee, Fall 2003
- Interview for local News TV Broadcast on DNR EIS modeling Activities, Spring 2004
- Interview for local News TV Broadcast on impacts of high precipitation and runoff, Summer 2004
- HPL Open House Poster Presentation, Fall 2004
- Chair, HPL/UMCES Christmas Float committee, Fall 2004
- HPL Open House Poster Presentation, Fall 2006
- Chair, HPL/UMCES Christmas Float committee, Fall 2006
- HPL Open House Poster Presentation, Fall 2007
- Chair, HPL/UMCES Christmas Float committee, Fall 2007
- HPL Open House Poster Presentation, Fall 2008
- HPL Open House Committee, Fall 2008
- Chair, HPL/UMCES Christmas Float committee, Fall 2008
- HPL Open House Committee, Fall 2009
- HPL/UMCES Christmas Float committee, Fall 2009
- HPL/UMCES Christmas Float committee, Fall 2010
- HPL Open House Poster Presentation, Fall 2011

C. UMCES and Horn Point Laboratory

- HPL Computer and Electronic Services Committee, Academic Year 1995/96
- TGIF Seminar Series, Organizer, Academic Year 1995/96
- HPL Seminar Committee, Chairman, Academic Year 1996/97
- HPL Education Committee, Academic Year 1997/98
- HPL Computer and Electronic Services Committee, Academic Year 1997/98
- HPL Postdoctoral Search Committee, Academic Year 1997/1998
- MEES interim Oceanography AOS co-chair Fall/Winter 1997/98
- HPL Search Committee (CES Unix System Administrator position), Fall 1997
- HPL Search Committee (CES Director of IT services position), Winter 1997/98
- HPL Information and Electronic Services Committee, Academic Year 1998/99
- HPL Search Committee (IES PC Administrator), Summer, 1999
- Chair, HPL Computer and Electronic Services Committee, Academic Year 1999/2000
- Facilities Renovation Committee (new wing construction), Spring 1999 - present
- Chair, HPL Computer and Electronic Services Committee, Academic Year 2000/2001
- Chair, HPL Computer and Electronic Services Committee, Academic Year 2001/2002
- HPL Search Committee for Microbial Ecologist position, Spring/Summer 2002.
- HPL Computer and Electronic Services Committee, Academic Year 2002/2003
- HPL IES Search Committee (IES Unix System Administrator), Fall 2003
- HPL Computer and Electronic Services Committee, Academic Year 2003/2004
- HPL Search Committee for Phys-Bio Interactions Fac. position, Summer/Fall 2004
- UMCES, Chair, Research Committee on UMCES Brand, UMCES Strategic Plan, Summer/Fall 2004
- Chair, HPL Computer and Electronic Services Committee, Academic Year 2004/2005
- Chair, UMCES Branding sub-committee, UMCES Strategic Plan, Summer/Fall 2004
- Chair, HPL Computer and Electronic Services Committee, Academic Year 2005/2006

- Co-Chair, HPL Seminar Committee, Academic Year 2006/2007
- HPL Computer and Electronic Services Committee, Academic Year 2006/2007
- UMCES Senator, three-year term, Fall 2006 – 2009
- HPL Computer and Electronic Services Committee, Academic Year 2007/2008
- HPL Education Committee, Academic Year 2008/2009
- UMCES Senator and Vice-Chair, two-year term, Fall 2009 – 2011
- HPL Education Committee, Academic Year 2009/2010
- Organizing Committee Co-Chair, UMCES Senate Faculty Convocation, Horn Point Laboratory, April 13-14, 2010
- HPL Education Committee Chair, Academic Year 2010/2011
- HPL Director Review Committee Chair, Spring 2011
- HPL Education Committee Chair, Academic Year 2011/2012
- UMCES Faculty Senator and Chair, three-year term, Fall 2011 – 2014
- HPL Education Committee, Academic Year 2012/2013

D. Local/National/International

- NOAA, NCOP proposal review panel, October 24, 1995.
- NASA Satellite Ocean Primary Productivity Workshop, June 11-13, 1996, Goddard Space Flight Center, Greenbelt, MD.
- Patuxent Wildlife Research Center Workshop, *Opportunities for Collaborative Research*, August 8, 1996, Patuxent Wildlife Research Center, Laurel, MD.
- U.S. JGOFS Synthesis and Modelling Project Workshop, August 13-19, 1996, Durham NH.
- U.S. JGOFS Arabian Sea Process Study Workshop, July 8-14, 1997, Durham NH..
- NASA SeaWifs Science Team Workshop, January 6-9, 1998, Baltimore MD.
- U.S. JGOFS Synthesis and Modelling Project Workshop, July 13-1, 1998, Durham NH.
- U.S. JGOFS Synthesis and Modelling Project Workshop and PI Meeting, July, 1999, Keystone CO.
- RIDGE 2000 Workshop, Hatfield Marine Science Center, September 20-23, 1999, Newport, OR.
- Co-Chairman, U.S. JGOFS SMP Working Group on Marine Nitrogen Fixation, June 1998-present
- U.S. JGOFS SMP Workshop, Conceptual and Practical Issues in Modelling Oceanic Nitrogen Fixation, Catalina Island, CA., September 27-30, 1999.
- NASA, Ocean Vector Winds proposal review panel, November 21-22, 1999.
- NSF, Ecological Determinants of the Oceanic Carbon Cycle, Timberline Lodge, OR., March 12-15
- NASA, Oceanography Review Panel, September 26-29, 2000.
- U.S. JGOFS Synthesis and Modelling Project Workshop and PI Meeting, July, 2000, WHOI, MA.
- Harmful Algal Bloom Observing System (HABSOS) Workshop, November 2000, Pensacola, FL.
- NASA, Oceanography Proposal Review Panel, May, 2001.
- RIDGE Workshop, Larval Biology, Dispersal and Gene Flow at Hydrothermal Vents: Results Symposium, May, 2001, Ogden Utah.
- U.S. JGOFS SMP Workshop, Assessing the Role of Calcification in the Ocean Carbon Cycle, June, 2001, WHOI, MA.
- NOPP, Oceanography Proposal Review Panel, July, 2001.
- U.S. JGOFS Synthesis and Modelling Project Workshop and PI Meeting, July, 2001, WHOI, MA.
- Chairman, CRC Exploratory Committee for the Promotion, and Development of Community Models for the Chesapeake Bay Region, January – August, 2002.

- U.S. JGOFS Synthesis and Modelling Project Workshop and PI Meeting, July, 2002, WHOI, MA.
- Chief organizer, CRC Community Modeling Project Workshop, June, 2002, Annapolis MD.
- External Thesis Reviewer, Ph.D. Dissertation of Lynne Caryn McArthur, U. South Australia, Sept, 2002
- Chairman, CRC Community Modeling Project Steering Committee, August 2002 to present.
- U.S. JGOFS SMP Model Intercomparison Testbed Workshop, ODU/CCPO, Norfolk VA, March, 2003
- Chairman, CRC CCMP Search Committee for Program Manager, Dec. 02 – June 03.
- Steering committee for the development of a Pacific subtropical process study as part of CLIVAR, May-December, 2003
- NSF Cabled Observatory Workshop, San Francisco, CA., October 2003
- CRC Community Modeling Project Workshop, VIMS, Gloucester VA, November, 2003
- CBP Coupling Water Quality and Upper Trophic Level Modeling workshop, Annapolis MD, Jan. 8, 2004
- CRC CCMP Physical Modeling Workshop, Fredericksburg, VA., February 27, 2004
- U.S. JGOFS Synthesis and Modelling Project Workshop and PI Meeting, July, 2004, WHOI, MA.
- Co-organizer, CRC CCMP Watershed Modeling Workshop, Baltimore, MD, September 24, 2004
- Contributions on biogeochemical measurements and modeling to the CLIVAR/GOOS Indian Ocean Panel Report/planning document, "Understanding the role of the Indian Ocean in the climate system – implementation plan for sustained observations", February, 2005.
- 2005, Estuarine Research Federation Special Session Convener, Chesapeake Bay Colloquium, COL-15: "Basin modeling for research and management"
- 2005, Estuarine Research Federation Special Session Convener, SPS-20: "Ecosystem based management"
- Chairman, Sustained Indian Ocean Biogeochemical and Ecosystem Research (SIBER) Workshop Planning Committee, Fall 2005 – Fall 2006.
- CLIVAR Indian Ocean Panel meeting, Honolulu HI, February 2006.
- Guest Panel member, CLIVAR Indian Ocean Panel, February, 2006 – present.
- AGU Biological Oceanography Secretary, July 2006 – July 2008.
- 2006, AGU Ocean Sciences Special Session Convener, 22K, 23M, 24N, 26K, "The Indian Ocean: Recent discoveries, links to global climate, atmosphere-ocean interaction, physical and biogeochemical response", Honolulu, HI, February 2006
- 2006, Chair and lead organizer, Sustained Indian Ocean Biogeochemical and Ecosystem Research (SIBER), International program development Workshop, Goa India, October 3-6.
- Fall 2006 – Spring 2007, program committee member, AGU Joint Assembly Meeting, Acapulco Mexico, 22-25 May, 2007
- Summer 2006 – Present, Chair "Oceanography at the University System of Maryland", ad hoc planning and development committee for the promotion of coordinated oceanographic research and education at UM
- 2007, ASLO Aquatic Sciences Meeting, Special Session Co-convener, Special Session on DOM production and cycling in marine systems, Santa Fe, NM, February 4-9.
- 2007 Invited participant, CLIVAR IOP meeting, Pretoria, South Africa, Apr. 23 -25
- 2007, Chair and lead organizer, Sustained Indian Ocean Biogeochemical and Ecosystem Research (SIBER), International program development Workshop, Goa India, November, 27-30
- 2007 Invited participant, IOGOOSV meeting, Phuket, Thailand, Dec. 4
- AGU Biological Oceanography Secretary, July 2008 – July 2010.
- Co-organizer and Session Chair, CCMP CheMS08 Symposium, Annapolis, MD, May 12-14, 2008.
- 2008, Invited participant, GLOBEC-IMBER Transition Task Team Meeting, Washington, DC, December 15.

- 2008 – 2010, Chair, SIBER program interim Scientific Steering Committee
- Feb. 2009 – Feb. 2010, Organizing Committee Chair, AGU 2010 Ocean Science Meeting
- 2009, AGU Section Nomination Committee
- 2009-2010, Regional Comparisons Workshop co-Chair, IMBER IMBIZO II, Crete, Greece, October 10-14
- 2009-2010, Organizing Committee Chair, ChesMS10 Symposium, Annapolis, Maryland, May 10-11
- 2009-2010, Organizing Committee and SSC Chair, SIBER SSC 1, Perth, Australia, July 12-16
- 2010, Ocean Sciences Meeting, Special Session Convener, “The Indian Ocean: Recent Advances in Physical, Biogeochemical, and Ecosystem Dynamics”, Portland, Oregon, February 22-26
- 2010– present, Chair, SIBER Scientific Steering Committee
- 2010-2011, Organizing Committee and SSC Chair, SIBER SSC 2, Chennai, India, July 25-29
- 2010-2011, Hydrodynamic Modeling Workshop, Organizing Committee Chair, Edgewater Maryland, June 9-10
- 2011, ASLO Aquatic Sciences Meeting, Emerging Issues Workshop Participant, “Implications of Increased Carbon Supply and Artificial Habitat for the Global Expansion of Jellyfish Blooms”, San Juan, Puerto Rico, February 12-13
- 2011, ASLO Aquatic Sciences Meeting, Special Session Convener, “Ecological Forecasting: Progress, Challenges and Prospects”, San Juan, Puerto Rico, February 14-15
- 2011-2012, Organizing Committee Chair, ChesMS12 Symposium, Annapolis, Maryland, May 21-22
- 2011-2012, Organizing Committee and SSC Chair, SIBER SSC 3, Cape Town, South Africa, October 15-17
- 2012, Ocean Sciences, Special Session Convener, “Infusing Biogeochemistry with Ecosystem Science”, Salt Lake City, Utah, February 20-24
- 2012, Chesapeake Modeling Symposium 2012, Special Session Co-convener, “Observations and Physical-Biogeochemical Modeling at the Fringes: Land-Water and Air-Water Interactions”, Annapolis, Maryland, May 21st
- 2012, Chesapeake Modeling Symposium 2012, Special Session Convener, “Interfacing Between Modeling, Management and the Public: TMDLs, Politics, Litigation and Conflicting Stakeholder Interests”, Annapolis, Maryland, May 22nd
- 2011, PAL LTER Review Panel, Antarctica, December 2-21
- 2012, AOGS-AGU Joint Assembly Meeting, Special Session Convener, “Physical and biogeochemical processes in the Indian Ocean: Recent progress and toward future collaborations”, Singapore, August 13-17
- 2010 – 2012, lead-editor, Journal of Marine Systems Special Issue on Regional Comparative Studies
- 2012-2013, co-editor, Biogeosciences Special Issue on Current Biogeochemical and Ecosystem Research in the Northern Indian Ocean.
- 2012 – 2013, IMBER Open Science Conference Organizaing Committee
- 2012 - 2013, Sabbatical Leave, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Hobart Tasmania
- 2012-2013, Organizing Committee and Chair, IIOE-2 Reference Group