VITA FOR EILEEN E. HOFMANN

Date of Revision: August 29, 2018

Present Title and Address: Professor
Center for Coastal Physical Oceanography
Department of Ocean, Earth and Atmospheric Sciences
Old Dominion University
Norfolk, Virginia 23508
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Degrees: B.S. (Biology), Chestnut Hill College, 1974
M.S. (Physical Oceanography), North Carolina State University, 1976
Ph.D. (Marine Sciences and Engineering), North Carolina State University, 1980

Research Interests: *Analysis and Modeling of Biological and Physical Interactions in Marine Ecosystems, Descriptive Physical Oceanography*

Professional Experience:

Sept. 1974 - Nov. 1979	Teaching Assistant, North Carolina State University Research Assistant, North Carolina State University Graduate Research Assistant, Skidaway Institute of Oceanography
Dec. 1979 - May 1980	Postdoctoral Research Associate, North Carolina State University
June 1980 - Jan. 1981	Postdoctoral Research Associate, Florida State University
Jan. 1981 - Aug. 1986	Assistant Research Scientist, Department of Oceanography, Texas A&M University
Sept. 1986 - Aug. 1989	Assistant Professor, Department of Oceanography, Texas A&M University
Sept. 1989 - June 1995	Associate Professor, Department of Oceanography, Old Dominion University
July 1995 - present	Professor, Department of Ocean, Earth, Atmospheric Sciences, Old Dominion University

Professional and Honorary Societies: Association for the Sciences of Limnology and Oceanography
American Geophysical Union
Society of Sigma Xi
Coastal and Estuarine Research Federation
National Shellfisheries Association

Committees and Offices:
Member, NCAR Scientific Computing Division Advisory Panel, (1986-1989)
Member, GESAMP Working Group 25 on Coastal Zone Modeling, (1986-1989)
Member, Ecology Panel of the National Research Council's Committee to Review the Outer Continental Shelf Environmental Studies Program, (1987-1990)
Member, National Research Council, Ocean Studies Board, (1988-1991)

Member, U.S. GLOBEC Steering Committee, (1989-1992, 1992-1994, 1995-1997, *Ex-Officio* 1998-present)
Member, U.S. GLOBEC Executive Committee, (1992-1997)
Member, Ocean Modeling Subgroup of National Academy of Sciences Global Climate Change Committee, (1989-1990)
Member, National Research Council, Ocean Studies Board, Committee on Coastal Oceans, (1990-1993)
Member, U.S. JGOFS Steering Committee, (1991-1993)
Secretary, Ocean Sciences Section, American Geophysical Union, (1990-1992)
Chair, Program Committee, Ocean Sciences Section, American Geophysical Union Fall 1990 and 1991 Meetings
Chair, Program Committee, Ocean Sciences Section, American Geophysical Union Spring 1991 Meeting
Chair, Program Committee, Ocean Sciences Section, 1992 and 1994 Ocean Sciences Meetings
Member, National Oceanic and Atmospheric Administration, CoastWatch Technical Advisory Committee, (1991-1993)
Member, User Working Group for the NASA Goddard Space Flight Center Distributed Active Archive Center, (1991-1995)
Member, American Geophysical Union Meetings Committee, (1994-1998)
Member, GLOBEC International Modeling Working Group, (1993-1995)
Member, JGOFS International Modeling and Synthesis Task Team, (1993-1995)
Member, JGOFS Synthesis and Modeling Project, (1995-present)
Member, National Research Council, Ocean Studies Board, (1995-1999)
Member, National Research Council Committee on Ecosystem Management for Sustainable Fisheries, (1995-1997)
Member, International GLOBEC Science Steering Committee, (1996-1999, 1999-2002, Ex-Officio 2002-2010)
Chair, International GLOBEC Southern Ocean Planning Group, (1997-2010)
Chair, U.S. Southern Ocean GLOBEC Science Steering Committee (2000-2010)
Member, National Research Council Committee on Environmental Information for Naval Use, (2001-2003)
Member, National Research Council Committee on Metrics for Global Change Research (2003-2008)
Member, University of South Florida, Doctoral Review of Marine Sciences Committee (February 2003)
Co-Chair, Integrating Circumpolar Ecosystem Dynamics, *Ad Hoc* Science Steering Committee (2004-present)
Invited Participant, International Whaling Commission, Scientific Committee, May 2004
Invited Expert, Commission for Conservation of Antarctic Marine Living Resources, Environmental Monitoring Management Working Group, August 2004
Member, North American Carbon Program Science Steering Committee (2005-2010)
Member, UNOLS Council (2005-2007)
Vice Chair, SCAR-SCOR Group of Experts on Oceanography (2005-2011)
Chair, American Geophysical Union, Ewing Medal Committee (2006-2008)
Member, EUR-OCEANS Scientific Council (2007-2009)

Member, National Research Council, Committee on Best Practices for Shellfish Mariculture and the Effects of Commercial Activities in Drake's Estero, Pt. Reyes National Seashore, California (2008-2010)

Member, American Geophysical Union, Editor Search Committee for *Reviews in Geophysics* (2009-2010)

Member, External Review Panel, Antarctic Ecosystem Research Division and U.S. Antarctic Marine Living Resources Program, Southwest Fisheries Science Center, La Jolla, CA (August 2009)

Chair, Science Steering Committee, Integrated Marine Biogeochemistry and Ecosystem Research (2010-2015) Project, Past Chair 2016

Member, Science Steering Committee, International Geosphere-Biosphere Program (2010-2015)

Member, National Research Council Committee, Legacies and Lessons of IPY 2007-2008 (2011-2012)

Member, External Review Committee, Department of Earth Sciences, Millersville University of Pennsylvania (2012)

Member, National Academies of Sciences, Engineering and Medicine, Polar Research Board (2012-2014, 2015-2017)

Chair, Scientific Organizing Committee, Integrated Marine Biogeochemistry and Ecosystem Research Project, Open Science Conference (2013-2014)

Member, Scientific Steering Committee, U.S. Ocean Carbon Biogeochemistry Program (2013-2016)

President-Elect, Ocean Sciences Section, American Geophysical Union (2015-2016)

Chair, Selection Committee, AGU Vice Chair Ocean Sciences Meeting (2016)

President, Ocean Sciences Section, American Geophysical Union (2017-2018)

Vice Chair, American Geophysical Union, Council Leadership Team (2017-2018)

Member, American Geophysical Union, Board of Directors (2017-2018)

Member, American Geophysical Union, Ethics Task Force (2016-2017)

Member, American Geophysical Union, College of Fellows, Centennial Subcommittee (2017-2018)

Member, National Research Council, Ocean Studies Board, Steering Committee for Fisheries Research and Monitoring for Atlantic Offshore Development (2017-2018)

Member, Integrated Marine Biosphere Research Project, Open Science Conference, Science Steering Committee (2017-2019)

Member, International Scientific Advisory Committee, Ocean Frontiers Institute, Dalhousie University (2017-present)

Lecturer, Austral Summer Institute, University of Concepción, Concepción, Chile (2018)

Chair, Selection Committee, AGU Vice Chair Ocean Sciences Meeting (2018)

Member, Southern Ocean Observing System Scientific Steering Committee (2018-2020)

Member, Executive Committee, Southern Ocean Observing System Scientific Steering Committee (2018-2020)

Member, National Academies, Standing Committee to Advise the Gulf Research Program on the Understanding Gulf Ocean Systems Research Campaign (2018-2021)

Editorial Boards:

Member, Editorial Board, *Dynamics of Atmospheres and Oceans*, 1988-2014

Member, Editorial Board, *Antarctic Science*, 1997-present

Member, Editorial Board, *Journal of Marine Research*, 1997-present
Member, Editorial Board, *Journal of Cetacean Research and Management*, 1999-2002
Member, Editorial Board, *Estuaries*, 1998-2001
Member, Editorial Board, *Polar Biology*, 1998-2003
Member, Editorial Board, *Journal of Marine Systems*, 2002-2006
Co-Editor in Chief, *Journal of Marine Systems*, 2007-present

Awards and Honors:
National Science Foundation, Visiting Professorship for Women, 1987
Old Dominion University 12th Annual Research Award, April 1996
IPCC, Contribution to the award of the Nobel Peace Prize, 2007
Fellow, American Geophysical Union, 2013

Reviewed Publications (since 2013; 186 Total):
Murphy, E.J., E.E. Hofmann, J.L. Watkins, N.M. Johnston, A. Piñones, T. Ballerini, S.L. Hill, P.N. Trathan, G.A. Tarling, R.A. Cavanagh, E.F. Young, S. Thorpe and P. Fretwell, 2013, Comparison of the structure and function of Southern Ocean regional ecosystems: the Antarctic Peninsula and South Georgia, *Journal of Marine Systems*, 109, 22-42.

Steele, J.H., K. Aydin, D.J. Gifford and E.E. Hofmann, 2013, Construction kits or virtual worlds; Management applications of E2E models, *Journal of Marine Systems*, 103-108.

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, G. Hunt, K. Drinkwater and C.L. Sabine, 2013, Bridging marine ecosystem and biogeochemistry research: Lessons and recommendations from comparative studies, *Journal of Marine Systems*, 161-175.

Piñones, A., E.E. Hofmann, K.L. Daly, M.S. Dinniman, and J.M. Klinck, 2013, Modeling the remote and local connectivity of Antarctic krill (*Euphausia superba*) populations along the western Antarctic Peninsula, *Marine Ecology Progress Series*, 481, 69-92.

Piñones, A., E.E. Hofmann, K.L. Daly, M.S. Dinniman, and J.M. Klinck, 2013, Modeling early life stages of Antarctic krill (*Euphausia superba*) in continental shelf environments on the west Antarctic Peninsula, *Deep-Sea Research I*, 82, 17-31.

Munroe, D.M., E.N. Powell, R. Mann, J.M. Klinck, and E.E. Hofmann, 2013, Underestimation of primary productivity on continental shelves: evidence from maximum size of extant surfclam (*Spisula solidissima*) populations. *Fisheries Oceanography*, doi: 10.1111/fog.12016.

Munroe, D.M., J.M. Klinck, E.E. Hofmann, and E.N. Powell, 2013, A modeling study of the role of marine protected areas in metapopulation genetic connectivity in Delaware Bay oysters. *Aquatic Conservation: Marine and Freshwater Ecosystems*, doi: 10.1002/aqc.240.

Munroe, D.M., E.E. Hofmann, E.N. Powell, and J.M. Klinck, 2013, How do shellfisheries influence genetic connectivity in metapopulations? A modeling study examining the role of lower size limits in oyster fisheries, *Canadian Journal of Fisheries and Aquatic Sciences*, 70, 1813-1828, doi: 10.1139/cjfas-2013-0089.

Turner, E., D.B. Haidvogel, E.E. Hofmann, H.P. Batchelder, M.J. Fogarty, and T. Powell, 2013, US GLOBEC: Program goals, approaches, and advances. *Oceanography*, 26(4), 12-21.

Di Lorenzo, E., D. Mountain, H.P. Batchelder, N. Bond, and E.E. Hofmann, 2013, Advances in marine ecosystem dynamics from US GLOBEC: The horizontal-advection, bottom-up forcing paradigm, *Oceanography*, 26(4), 22-33.

Ruzicka, J.J., J.H. Steele, S.K. Gaichas, T. Ballerini, D.J. Gifford, R.D. Brodeur, and E.E. Hofmann, 2013, Analysis of energy flow in US GLOBEC ecosystems using end-to-end models, *Oceanography*, 26(4), 82-97.

Haidvogel, D.B., E. Turner, E.N. Curchitser, and E.E. Hofmann, 2013, Looking forward: Transdisciplinary modeling, environmental forecasting, and management, *Oceanography*, 26(4), 128-135.

Burge, C.A., C.M. Eakin, C.S. Friedman, B. Froelich, P.K. Hershberger, E.E. Hofmann, L.E. Petes, K.C. Prager, E. Weil, B.L. Willis, S.E. Ford, and C.D. Harvell, 2014, Climate change influences on marine infectious diseases: Implications for management and society, *Annual Review Marine Science*, 6:1.1–1.29.

Smith, W.O., Jr., M.S. Dinniman, E.E. Hofmann, and J.M. Klinck, 2014, The effects of changing winds and temperatures on the oceanography of the Ross Sea in the 21st century, *Geophysical Research Letters*, doi: 10.1002/2014GL059311.

Ballerini, T., E.E. Hofmann, D.G. Ainley, K. Daly, M. Marrari, C. Ribic, W.O. Smith, Jr., and J.H. Steele, 2014, The marine food web of the western Antarctic Peninsula continental shelf – Structure and dynamics, *Progress in Oceanography*, 122, 10-29.

Palliard, C., F. Jean, S.E. Ford, E.N. Powell, J.M. Klinck, E.E. Hofmann, and J. Flye-Sainte-Marie, 2014, A theoretical individual-based model of Brown Ring Disease in manila clams, *Ruditapes philippinarum*, *Journal of Sea Research*, 19, 15-34.

Smith, W.O. Jr., K.T. Goetz, D.E. Kaufman, B.Y. Queste, V. Asper, D.P. Costa, M.S. Dinniman, M.A.M. Friedrichs, E.E. Hofmann, K.J. Heywood, J.M. Klinck, J.T. Kohut, and C.M. Lee. 2014. Multiplatform, multidisciplinary investigations of the impacts of Modified Circumpolar Deep Water in the Ross Sea, Antarctica. *Oceanography*, 27(2):180–185, http://dx.doi.org/10.5670/oceanog.2014.36.

Constable, A.J., and Others, 2014, Climate change and Southern Ocean ecosystems I: How changes in physical habitats directly affect marine biota. *Global Change Biology*, 20:3004-3025.

McBride, M.M., Dalpadado, P., Drinkwater, K., Godø, O.R., Kristiansen, T., Murphy, E., Subbey, S., Hofmann, E., Hollowed, A., Loeng, H., Hobday, A.J., 2014. Krill, climate, and contrasting future scenarios for Arctic and Antarctic fisheries. *ICES Journal Marine Research*, doi:10.1093/icesjms/fsu002.

Portner, H.O. and Others (Hofmann, 26 of 39 co-authors), 2014, Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, pp. 411-484.

Munroe, D., J.M. Klinck, E.E. Hofmann, E.N. Powell, 2014, A modeling study of metapopulation genetic connectivity in Delaware Bay oysters and the role of marine protected areas, *Aquatic Conservation*, doi:10.1002/aqc.2400.

Narváez, D., D.M. Munroe, E.E. Hofmann, J.M. Klinck, E.N. Powell, R. Mann, and E. Curchitser, 2015, Long-term dynamics in Atlantic surfclam (*Spisula solidissima*) populations: The role of bottom water temperature, *Journal Marine Systems*, 141, 136-148.

Levin, L.A., K. K. Liu, D. Breitburg, K. Limburg, D. Swaney, E. Montes, K. Emeis, J. Cloern, A. Goffert, M. Giani, P. Wassman, E. Hofmann, C. Rabouille, O. Ragueneau, W. Naqvi, B. Currie, K. Wishner, and C. Deutsch, 2015, Biogeochemistry-ecosystem-human interactions on changing continental margins, *Journal Marine Systems*, 141, 3-17.

Feng, Y., M.A.M. Friedrichs, J. Wilkin, H. Tian, Q. Yang, E.E. Hofmann, J.D. Wiggert, R.R. Hood, 2015, Chesapeake Bay nitrogen fluxes derived from a land-estuarine ocean biogeochemical modeling system: Model description, evaluation and nitrogen budgets, *Journal of Geophysical Research – Biogeosciences*, doi:10.1002/2015JG002931.

Munroe, D.M., E.N. Powell, S.E. Ford, E.E. Hofmann, J.M. Klinck, 2015, Outcomes of asymmetric selection pressure and larval dispersal on evolution of disease resistance: a metapopulation modeling study with oysters, *Marine Ecology Progress Series*, 531:221-239, doi:10.3354/meps11349.

Powell, E.N., E.E. Hofmann, 2015, Models of marine molluscan diseases: trends and challenges, *Journal Invertebrate Pathology*, doi:10.1016/j.jip.2015.07.017.

Powell, E.N., J.M. Klinck, D.M. Munroe, E.E. Hofmann, P. Moreno, R. Mann, 2015, The value of captains' behavioral choices in the success of the surfclam (*Spisula solidissima*) fishery on the US Mid-Atlantic coast: a model evaluation, *Journal Northwest Atlantic Fisheries Science* 47:1-27.

Flynn, K. J., M. St John, J.A. Raven, D.O. Skibinski, J.I. Allen, A. Mitra, A., E.E. Hofmann, 2015, Acclimation, adaptation, traits and trade-offs in plankton functional type models: reconciling terminology for biology and modelling. *Journal of Plankton Research*, fbv036.

Piñones, A., E.E. Hofmann, M.S. Dinniman, and L.B. Davis, 2015, Transport and fate of Euphausiids in the Ross Sea, *Polar Biology*, doi:10.1007/s00300-015-1798-5.

McGillicuddy, D.J., Jr., P.N. Sedwick, M.S. Dinniman, K.R. Arrigo, T.S. Bibby, B.J.W. Greenan, E.E. Hofmann, J.M. Klinck, W.O. Smith Jr., S.L. Mack, C.M. Marsay, B.M. Sohst, and G.L. van Dijken, 2015, Iron supply and demand in an Antarctic shelf ecosystem. *Geophysical Research Letters*, 42, 8088-8097.

Hofmann, E.E., A. Bundy, K. Drinkwater, A.R. Piola, B. Avril, C. Robinson, E. Murphy, L. Maddison, E. Svendsen, J. Hall, Y. Xu, 2016, IMBER – Research for marine sustainability: Synthesis and the way forward, *Anthropocene*, doi:10.1016/j.ancene.2015.12.002.

Lafferty, K. D., E.E. Hofmann, 2016, Marine disease impacts, diagnosis, forecasting, management and policy, *Philosophical Transactions Royal Society B*, 20150200, doi.org/10.1098/rstb.2015.0200.

Bidegain, G., E.N. Powell, J.M. Klinck, T. Ben-Horin, E.E. Hofmann, 2016, Marine infectious disease dynamics and outbreak thresholds: pandemic infection and the potential role of filter feeders, *Ecospshere*, 328, 44-61.

Bidegain, G., E.N. Powell, J.M. Klinck, T. Ben-Horin, E.E. Hofmann, 2016, Microparasitic disease dynamics in benthic suspension feeders: infective dose, non-focal hosts, and particle diffusion, *Ecological Modeling*, http://dx.doi.org/10.1002/ecs2.1286.

Munroe, D.M., D. A. Narváez, D. Hennen, L. Jacobsen, R. Mann, E.E. Hofmann, E.N. Powell, J. M. Klinck, 2016, The roles of fishing and bottom water temperature as drivers of change in maximum shell length in Atlantic surfclams (*Spisula solidissima*), *Coastal and Estuarine Shelf Science*, 170, 112-122.

Constable, A.J., and Others, 2016, Developing priority variables ("ecosystem Essential Ocean Variables" — eEOVs) for observing dynamics and change in Southern Ocean ecosystems, *Journal Marine Systems*, http://doi.org/10.1016/j.jmarsys.2016.05.003.

Murphy, E.J., R.A. Cavanagh, K.F. Drinkwater, S.M. Grant, E.E. Hofmann, G. Hunt, N.M. Johnson, 2016, Linking biological diversity and ecosystem functioning in polar ocean ecosystems, *Philosophical Transactions Royal Society B*, 283: 20161646. http://dx.doi.org/10.1098/rspb.2016.1646.

Hofmann, E.E. and the IMBeR Scientific Steering Committee (eds.), 2016, IMBeR 2016-2025: Science Plan and Implementation Strategy, IMBeR International Project Office, Bergen, Norway.

Meyers, S.D., S.P. Geiger, M.E. Luther, D. Narváez, M.E. Frischer, E. Hofmann, 2017, Predicting larval dispersal and source/sink relationships of eastern oyster (*Crassostrea virginica*) populations using a coupled biophysical model, *Journal Shellfish Research*, 36, 101-118.

Kaufman, D.E., M.A.M. Friedrichs, W.O. Smith, Jr., E.E. Hofmann, M.S. Dinniman, J.C. Hemmings, 2017, Climate change impacts on southern Ross Sea phytoplankton composition, productivity, and export. *Journal of Geophysical Research: Oceans*, 122.3: 2339-2359.

Cavanagh, R.D., E.J. Murphy, T.J. Bracegirdle, J. Turner, C.A. Knowland, S.P. Corney, W.O. Smith, C.M. Waluda, N.M. Johnston, R.G.J. Bellerby, A.J. Constable, D.P. Costa, E.E. Hofmann, J.A. Jackson, I.J. Staniland, D. Wolf-Gladrow, J.C. Xavier, 2017, A synergistic approach for evaluating climate model output for ecological applications, *Frontiers in Marine Science*, doi:10.3389/fmars.2017.00308.

Davis, L.B., E.E. Hofmann, J.M. Klinck, M.S. Dinniman, A. Piñones, 2017, Distributions of *Euphausia superba*, *Euphausia crystallorophias*, and *Pleuragramma antarcticum* with correlations to environmental features in the western Ross Sea, Antarctica, *Marine Ecology Progress Series*, doi: 10.3354/meps12347.

Dinniman, M.S., J.M. Klinck, E.E. Hofmann, W.O. Smith, Jr., 2017, Effects of projected changes in wind, atmospheric temperature and freshwater inflow on the Ross Sea, *Journal of Climate*, doi/10.1175/JCLI-D-17-0351.1.

Greer, A.T., A.M. Shiller, E.E. Hofmann, J.D. Wiggert, and 36 Others, 2018, Functioning of coastal-river dominated ecosystems and implications for oil spill response: from observations to mechanisms and models, *Oceanography*, https://doi.org/10.5670/oceanog.2018.302.

Powell, E.N., E.E. Hofmann, J.M. Klinck, in press, Oysters, sustainability, management models, and the world of reference points, *Journal Shellfish Research*.

Hofmann, E.E., E.N. Powell, J.M. Klinck, D.M. Munroe, R. Mann, D.B. Haidvogel, D.A. Narváez, X. Zhang, K.M. Kuykendall, in press, An overview of the factors affecting distribution of the Atlantic surfclam (*Spisula solidissima*), A continental shelf biomass dominant, during a period of climate change, *Journal Shellfish Research*.

Munroe, D.M., D. Haidvogel, J.C. Caracappa, J.M. Klinck, E.N. Powell, E.E. Hofmann, B.V. Shank, D.R. Hart, in press, Modeling larval dispersal and connectivity for Atlantic sea scallop (*Placopecten magellanicus*) in the Middle Atlantic Bight, *Fisheries Research*.

Piñones, A., E.E. Hofmann, D.P. Costa, K. Goetz, J.M. Burns, F. Roquet, M.S. Dinniman, J.M. Klinck, submitted, Temporal and spatial variability of hydrographic conditions along the inner shelf of the Ross Sea obtained using instrumented seals, *Progress in Oceanography*.

Ben-Horin, T., J. Maynard, E. Hofmann, E. Powell, B. Bolker, H. McCallum, submitted, Modeling and forecasting disease dynamics in the sea. In: *Marine Disease Ecology*, D.C. Behringer, B.R. Silliman, K.D. Lafferty, eds., Oxford University Press.

Signorini, S.R., A. Mannino, M. A. M. Friedrichs, P. St-Laurent, J. Wilkin, A. Tabatabai, R. G. Najjar, E.E. Hofmann, F. Da, H. Tian, and Y. Yao, submitted, Estuarine dissolved organic carbon flux from space: with application to Chesapeake and Delaware Bays, *Journal Geophysical Research – Oceans*.

Friedrichs, M.A.M., P. St-Laurent, Y. Xiao, E. Hofmann, K. Hyde, A. Mannino, R.G. Najjar, D. Narváez, S.R. Signorini, H. Tian, J. Wilkin, Y. Yao, J. Xue, submitted, Ocean circulation

causes strong variability in Mid-Atlantic Bight net community production, *Journal Geophysical Research – Oceans*.

Books

Foundations for Ecological Research West of the Antarctic Peninsula, American Geophysical Union, Antarctic Research Series, R.M. Ross, E.E. Hofmann, and L.B. Quetin, Co-Editors, AGU Antarctic Research Series, Vol. 70, 1996.

Marine Ecosystems and Climate Change, M. Barange, J. Field, R. Harris, E. Hofmann, I. Perry, F. Werner, (eds.), Oxford University Press, 2010.

Edited Journal Special Issues

Integrated Ecosystem Studies of Western Antarctic Peninsula Continental Shelf Waters and Related Southern Ocean Regions, E.E. Hofmann, P.H. Wiebe, D.P. Costa, and J.J. Torres, Co-Editors, *Deep-Sea Research II*, 51(17-19), 2004.

Dynamics of plankton, krill, and predators in relation to environmental features of the western Antarctic Peninsula and related areas: SO GLOBEC Part II, E.E. Hofmann, P.H. Wiebe, D.P. Costa, J.J. Torres, Co-Editors, *Deep-Sea Res. II*, 55(3-4), 2008.

3rd GLOBEC OSM: From ecosystem function to ecosystem prediction. R.I. Perry, M. Barange, E. Hofmann, C. Moloney, G. Ottersen, Y. Sakurai, Co-Editors, *Progress in Oceanography*, 87(1-4), 2010.

Understanding the Linkages between Antarctic Food Webs and the Environment: A Synthesis of Southern Ocean GLOBEC Studies, E.E. Hofmann, P.H. Wiebe, D.P. Costa, J.J. Torres, Co-Editors, *Deep-Sea Research II*, 58(13-16), 2011.

The challenges of understanding and managing changing marine social-ecological systems, R.I. Perry, A. Bundy, E.E. Hofmann, Co-Editors, *Current Opinion in Environmental Sustainability*, 4(3), 2012.

End-to-End Modeling: Toward Comparative Analysis of Marine Ecosystem Organization, J.H. Steele, E.E. Hofmann, D.J. Gifford, Co-Editors, *Progress in Oceanography*, 102, 2012.

Ecology of Infectious Diseases – Oysters and Estuaries, E.E. Hofmann, Guest Editor, *Journal Marine Research*, 70(2-3), 2012.

U.S. GLOBEC: Understanding Climate Impacts on Ocean Ecosystems, D. Haidvogel, E. Hofmann, C. Mengelt, E. Turner, Guest Editors, *Oceanography*, 26(4), 2013.

Marine Disease, K. Lafferty, E. Hofmann, Guest Editors, *Philosophical Transactions of the Royal Society B*, 371(1689), 2016.

Teaching Experience:

OCEN 405/505 Physical Oceanography
Fall Semester 1995 (11 students)

OCEN 689 Special Topics in Mathematical Modeling of Marine Ecosystems
Spring Semester 1982 (7 students), 1985 (10 students), Fall Semester 1986 (5 students), 1987 (9 students), 1988 (4 students)

OEAS 711/811 Regional Oceanography, Fall Semester, 2008 (3 students), Fall Semester 2011 (3 students)

OEAS 604 Introduction to Physical Oceanography, Fall Semester 2013 (13 students), Fall Semester 2014 (12 students), Fall Semester 2015 (11 students), Fall Semester 2016 (11 students)

OCEN 755/855 Mathematical Modeling of Marine Ecosystems
Fall Semester 1990 (8 students), Spring Semester 1992 (3 students), Fall Semester 1994 (8 students), Fall Semester 1997 (3 students), Fall Semester 1999 (10 students), Fall Semester 2004 (3 students), Fall Semester 2006 (2 students), Fall Semester 2007 (2 students), Spring Semester 2010 (3 students), Spring Semester 2012 (3 students), Spring Semester 2018 (2 students)

OCEN 689 Special Topics in Space and Time Scales in Biological Oceanography
Spring Semester, 1983 (6 students)

OCEN 608 Introduction to Physical Oceanography
Spring Semester, 1987 (12 students), Fall Semester 1991 (14 students). 1992 (12 students), 1993 (17 students), 2012 (12 students)

OCEN 640 Advanced Biological Oceanography
Fall Semester, 1989 (21 students), 1990 (21 students)

OCEN 895 Readings in Patch Dynamics
Spring Semester, 1992 (4 students)

OCEN 895 Readings in Structure and Function of Marine Ecosystems
Fall Semester 1992 (5 students), Fall Semester 1996 (4 students), Fall Semester 1998 (3 students), Fall Semester 2000 (8 students), Spring Semester 2004 (3 students), Spring Semester 2007 (3 students)

OCEN 895 Readings in Physical and Biological Processes of Mixed Layers
Fall Semester 1993 (3 students)

OCEN 895 Predator-Prey Interactions in High Latitude Marine Ecosystems
Spring Semester 2006 (1 student)

OCEN 895 Circulation Processes in Antarctic Continental Shelf Waters
Fall Semester 2006 (2 students)

OCEN 895 End-to-End Modeling of Marine Food Webs: Structures, Approaches and Implications, Fall Semester 2009 (4 students)

Student Committees Chaired:

Ph.D. Students

Joji Ishizaka	*Coupling of Coastal Zone Color Scanner Data to a Physical-Biological Model of the Southeastern U.S. Continental Shelf Ecosystem*, Texas A&M University, May 1989
Donald E. Eliason	*A Modeling Study of the Circulation of East Lagoon, Galveston, Texas*, Texas A&M University, December 1989
Jorge E. Capella	*Circulation and Temperature Effects on the Development and Distribution of the Eggs and Larvae of the Antarctic Krill, Euphausia superba: A Modeling Study*, Texas A&M University, December 1989
John R. Moisan	*Modeling Nutrient and Plankton Processes in the California Coastal Transition Zone*, Old Dominion University, May 1993
Margaret M. Dekshenieks	*The Effects of Environmental Variability on the Population Structure of the Eastern Oyster (Crassostrea virginica): A Modeling Study*, Old Dominion University, May 1996

Cathy M. Lascara *Seasonal and Mesoscale Variability in the Distribution of Antarctic Krill, Euphausia superba, West of the Antarctic Peninsula*, Old Dominion University, May 1996

James V. Koziana *A Coupled Bio-optical and Mixed Layer Model for the Equatorial Pacific*, Old Dominion University, December 1999

Marjorie A. M. Friedrichs *Physical Control of Biological Processes in the Central Equatorial Pacific: A Data Assimilative Modeling Study*, Old Dominion University, December 1999

Tonya D. Clayton *Trichodesmium spp.: Numerical Studies of Resource Competition, Carbohydrate Ballasting, and Remote-sensing Reflectance*, Old Dominion University, August 2001

Bettina A. Fach *Modeling Studies of Antarctic Krill (Euphausia superba) Survival During Transport Across the Scotia Sea and Environs*, Old Dominion University, May 2003

Hae-Cheol Kim *Estimation of Primary Production and Carbon Flux in Antarctic Coastal Waters: A Modeling Study*, Old Dominion University, December 2004

Baris Salihoglu *Modeling the Effects of Physical and Biogeochemical Processes on Phytoplankton Species and Carbon Production in the Equatorial Pacific Ocean*, Old Dominion University, August 2005

Erik D. Chapman *Factors Affecting Adult Foraging and Chick Growth of Adélie Penguins (Pygoscelis adeliae) off the Western Antarctic Peninsula: A Modeling Study*, Old Dominion University, May 2009

Maria Andrea Piñones *Circulation on the Western Antarctic Peninsula: Implications for Biological Production*, Old Dominion University, December 2011

M.S. Students

Dorlisa Hommel *Plankton Transport and Residence Times Around a Tall Seamount: Simulation Results*, Old Dominion University, December 1992

Eddie Haskell *Modeling Plankton Community Structure Under Environmental Forcing on the Southeastern U.S. Continental Shelf*, Old Dominion University, December 1997. Student received Master's Thesis Award given by the Conference of Southern Graduate Schools (CSGS), Charleston, SC, 20-22 February 1999

Michele Paraso *Modeling Environmental Effects on MSX Prevalence and Intensity in Eastern Oyster (Crassostrea virginica) Populations*, Old Dominion University, May 1998

Tian Tian *Model-based Analyses of Nitrogen Cycling on the Middle Atlantic Bight Continental Shelf*, Old Dominion University, August 2011

Alexandra Mattheus Non-thesis, Graduation May 2011

Brynn Davis *Climatological Distributions of Euphausia superba, Euphausia crystallorophias, and Pleuragramma antarcticum in the Western Ross Sea and Correlations with Environmental Features*, Graduation December 2016

Postdoctoral Advisees:

Julie Ambler	Texas A&M University, 1985-1987
Marjorie Friedrichs	Old Dominion University**,** 2000-2002
Jerry Wiggert	Old Dominion University, 2003-2006
Tosca Ballerini	Old Dominion University, 2008-2011
Andrea Piñones	Old Dominion University, 2011-2012
Diego Navárez	Old Dominion University, 2012-2014
Elodie Salmon	Old Dominion University, 2013-2014

Contracts and Grants - Awarded:

A Model of Biological Responses to Gulf Stream Induced Upwelling, National Science Foundation, Grant No. OCE-8109446, 06/1/81-11/30/82, $35,791, E. Hofmann, Principal Investigator.

Modelling of Springtime and Summertime Physical-Biological Interactions on the Southeastern Shelf of the U.S., National Science Foundation, Grant No. OCE-8320650, 03/15/84-02/28/87, $108,080, E. Hofmann, Principal Investigator.

Application of Empirical Search and Inverse Techniques to the Study of General Ocean Circulation Problems with Emphasis on the Gulf of Mexico, Drake Passage and the South Atlantic, Office of Naval Research, Contract No. N00014-80-C-0113, 02/1/86-11/30/87, $33,201, E. Hofmann and S. Worley, Co-Principal Investigators.

The Use of Satellite-Derived Chlorophyll Fields in Modeling Carbon Flux on the Southeastern U. S. Continental Shelf, National Aeronautics and Space Administration, Grant No. NAGW-852, 12/1/86-03/31/89, $108,765, E. Hofmann and C. McClain, Co-Principal Investigators.

Collaborative Research on a Descent-Ascent Model of the Eggs and Larvae of Antarctic Krill, National Science Foundation-Division of Polar Programs, Grant No. DPP-8515486, 03/15/86-08/31/89, $74,813, E. Hofmann, R. Ross, and L. Quetin, Co-Principal Investigators.

Application of Empirical Search and Inverse Techniques to Hydrographic Data from the Blake Plateau, National Science Foundation, Grant No. RII-8600478, 01/1/87-06/30/89, $56,978, E. Hofmann, Principal Investigator.

Physical-Biological Modeling Studies of the Coastal Transition Zone, Office of Naval Research, Grant No. N00014-87-K-0271, 05/1/87-05/31/90, $109,410, E. Hofmann, Principal Investigator.

Physical-Biological Modeling Studies, Office of Naval Research, Grant No. N00014-90-J-1930, 07/1/90-06/30/93, $173,685, E. Hofmann, Principal Investigator.

The Use of Ocean Color Measurements in Coupled Physical-Biological Models with Application to the Southeastern U. S. Continental Shelf, National Aeronautics and Space Administration, Grant No. NAG-5-1401, 07/1/90-06/30/93, $212,939, E. Hofmann and C. McClain, Co-Principal Investigators.

Long-Term Ecological Research on the Antarctic Marine Ecosystem: An Ice-Dominated Environment, National Science Foundation-Division of Polar Programs, 10/31/91-09/30/97, $3,761,395 (total award), $318,668 (to Hofmann at ODU), R. Ross, L. Quetin, B. Prézelin, R. Smith, E. Hofmann, J. Klinck, W. Trivelpiece, and W. Fraser, Co-Principal Investigators.

Coupled Oyster-Hydrodynamic Model for Galveston Bay and the Galveston Bay Ship Channel Project, U. S. Army Corps of Engineers, 07/1/91-06/30/96, $139,720, E. Powell, E. Hofmann and J. Klinck, Co-Principal Investigators. Grant extended through 6/30/95, additional $100,000.

Physical-Biological Interactions in the Global Equatorial Surface Layer, NASA Earth Science Application Division, Office of Space Science Applications, 02/15/93-02/14/97, $1,037,457 (total request), 4 years, $351,413 to ODU, C.R. McClain, A. Busalacchi, H. Ducklow, G. Feldman, E. Hofmann, and C. Koblinsky, Co-Principal Investigators.

Crassostrea virginica pathogens in Chesapeake Bay oyster populations: a dual disease simulation model of parasite-host interactions over a large spatial scale. NOAA/Sea Grant, 10/1/95-09/30/97, $101,068, S. Jordan, E. Hofmann, J. Klinck and E. Powell, Co-Principal Investigators.

Modeling the transport and exchange of krill between the Antarctic Peninsula and South Georgia. National Science Foundation-Office of Polar Programs, 10/1/95-09/30/98, $212,149, E. Hofmann, J. Klinck, and E. Murphy, Co-Principal Investigators.

Synthesis of existing high resolution LTER/Icecolors databases to advance physical-bio-optical modeling of Antarctic primary production. National Science Foundation-Office of Polar Programs, 12/1/96-04/30/98, $50,000 (to ODU), B. Prézelin and E. Hofmann, Co-Principal Investigators.

Physical and Biological Interactions in the Global Surface Layer, NASA, 11/1/97-10/31/99, $119,046, E. Hofmann, Principal Investigator.

Multi-Dimensional Data Assimilation for Physical-Biological Models, Office of Naval Research, 01/1/98-12/31/99, $95,112, E. Hofmann and P. Donaghay, Co-Principal Investigators.

Southern Ocean GLOBEC Planning Workshop; National Science Foundation (Grant NSF-OPP-9817052, ODURF 390151), 09/1/98-08/31/00, $45,000, E. Hofmann, Principal Investigator.

High-Trophic Level Ecosystem Response to Climate Change in Antarctica;, NASA (NAG5-8114, ODURF 583540), 02/01/99-12/31/01, $150,351 ($40,636 to ODU), E. Hofmann and S. Emslie, Co-Principal Investigators.

Modeling the Effects of Climate Variability on the Prevalence and Intensity of Dermo and MSX Diseases in Eastern Oyster Populations, NOAA (Sea Grant), (VGMSC Sub #5-29457, ODURF 593381), 10/01/99-09/30/01, $44,124 (to ODU), E. Hofmann, J. Klinck, E. Burreson, S. Jordan, E. Powell, and S. Ford, Co-Principal Investigators.

Southern Ocean Global Ocean Ecosystems Dynamics (GLOBEC) Program, Scientific Committee on Oceanic Research (SCOR)-The Johns Hopkins University, (ODURF 703471), 03/17/00-03/16/08, $25,000, E. Hofmann, Principal Investigator.

Collaborative Research: Comparative Modeling and Data Analysis Studies for the Ross Sea and West Antarctic Peninsula Regions: A JGOFS Synthesis and Modeling Project, National Science Foundation (Grant NSF-OCE-9911731, ODURF 300551), 6/15/00-5/31/03, $236,250 (to ODU), E. Hofmann, J. Klinck, W. Smith, and B. Prézelin, Co-Principal Investigators.

Collaborative Research: WinDSSOcK: Winter Distribution and Success of Southern Ocean Krill (Hydrography and Modeling Studies), National Science Foundation (Grant NSF-OPP-9909956, ODURF 394081), 09/15/00-08/31/03, $305,400 (to ODU), E. Hofmann, J. Klinck, R. Locarnini, and 21 others, Co-Principal Investigators.

Southern Ocean GLOBEC Planning Office, National Science Foundation (Grant NSF-OPP-0003966, ODURF 304771), 10/1/00-09/30/03, $211,963, E. Hofmann, Principal Investigator.

Modeling Hard Clam Growth, Survival and Environmental Interactions, New York Sea Grant, 01/01/01-04/31/03, $83,846 (to ODU), E. Hofmann, J. Klinck, J. Kraeuter, E. Powell, M. Bricelj, and R. Grizzle, Co-Principal Investigators.

Variability in Transport and Recruitment of Antarctic Krill Across the Scotia Sea, National Science Foundation Office of Polar Programs, 01/01/2001-12/31/2003, $348,576, E. Hofmann, J. Klinck, and E. Murphy, Co-Principal Investigators.

Physical-Biological Interactions and the Carbon Cycle of the Tropical Pacific and Atlantic Oceans, NASA, 09/01/01-08/31/04, $92,899 (to ODU), R. Murtugudde, E. Hofmann, J.R. Christian, and A.J. Busalacchi, Co-Principal Investigators.

The Partnership for Advancing Interdisciplinary Global Modeling, NOPP funding, 02/01/02-02/01/05, $171,097 (to ODU), L. Rothstein, J. Cullen, K. Denman, C. McClain, D. Haidvogel, E. Hofmann, D. Karl, D. McGillicuddy, S. Doney, H. Ducklow, M. Abbot, E. Chassignet, R. Smith, J. Yoder, J. Kindle, and M. Follows, Co-Principal Investigators.

Eastern U.S. Continental Shelf Carbon Budget: Modeling, Data Assimilation, and Analysis, NASA, 01/05/04-04/30/07, Final ODU budget is about $258,000, but still being negotiated, E. Hofmann, C.R. McClain, D. Haidvogel, J. Wilkin, C. Lee, A. Mannino, J. O'Reilly, R. Najjar, and J. Yoder, Co-Principal Investigators.

Seasonal Biogeochemical Processes in the Ross Sea: A Modeling Approach, National Science Foundation, Office of Polar Programs, 01/05/04-04/30/07, $397,293 (to ODU), E. Hofmann, J. Klinck, and W. Smith, Co-Principal Investigators.

Modeling Hard Clam Growth, Survival and Environmental Interactions, New York Sea Grant, 01/01/2001-04/30/2003, $83,846 (to ODU), E. Hofmann, J. Klinck, J. Kraeuter, E. Powell, M. Bricelj, and R. Grizzle, Co-Principal Investigators.

Seasonal Biogeochemical Processes in the Ross Sea: A Modeling Approach, National Science Foundation, Office of Polar Programs, 01/05/04-04/30/07, $397,293 (to ODU), E. Hofmann, J. Klinck, and W. Smith, Co-Principal Investigators.

The Importance of Blooms of Brown Tide, *Aureococcus anophagefferens*, in Coastal Lagoonal Systems: Coupling Numerical Simulation Modeling and Experiments to Determine Population Effects on Hard Clam, *Mercenaria mercenaria*, Individuals, Cohorts and Populations, NOAA/EPA Harmful Algal Bloom Initiative, 01/12/04-11/31/07, $137,889 (to ODU), J. Kraeuter, V.M. Bricelj, E.Powell, E. Hofmann, J. Klinck, and M Gastrich, Co-Principal Investigators.

Genomic Approaches to Understanding Genetic and Physiological Causes of Variation in Survival, Dispersal, and Recruitment of Larval Marine Organisms, National Science Foundation Biocomplexity in the Environment Initiative, 10/15/04-10/14/07, $114,897 (ODU component), D. Hedgecock, D. Manahan, E. Hofmann, J. Klinck, and E. Powell, Co-Principal Investigators.

Modeling Oyster Larvae Transport in Chesapeake Bay, NOAA, Chesapeake Bay Program, 01/10/04-09/30/05, $45,945, E. Hofmann and J. Klinck, Co-Principal Investigators.

A Modeling Study of the Growth, Survival and Recruitment of Hard Clam (*Mercenaria mercenaria*) Larval and Post-settlement Populations, New York Sea Grant, 08/15/04-08/14/05, $30,465, E. Hofmann, J. Klinck, J. Kraeuter, E. Powell, M. Bricelj, and S. Buckner, Co-Principal Investigators.

Continued Hydrographic Studies and Analyses in Support of the U.S. AMLR Program, NOAA, 09/01/04-08/31/05, $24,997, E.E. Hofmann and J.M. Klinck, Co-Principal Investigators.

Continued Hydrographic Studies and Analyses in Support of the U.S. AMLR Program, NOAA, 09/01/04-08/31/06, $24,997, E.E. Hofmann and J.M. Klinck, Co-Principal Investigators.

U.S. SO GLOBEC Synthesis and Modeling: Southern Ocean GLOBEC (SO GLOBEC) Planning Office, National Science Foundation, Office of Polar Programs, 10/01/05-09/30/08, $222,861, E.E. Hofmann, Principal Investigator.

Habitat Utilization of Southern Ocean Seals: Foraging Behavior of Crabeater and Elephant Seals Using Novel Methods of Oceanographic Data Collection, National Science Foundation, Office of Polar Programs, 09/01/05-08/31/08, $120,718, D. Costa, D. Crocker, E. Hofmann, and J. Klinck, Co-Principal Investigators.

Collaborative Research: U.S. SO GLOBEC Synthesis and Modeling: Understanding Interactions Between Climate Warming, Gyre Dynamics and Western Antarctic Peninsula Ecosystem Response, National Science Foundation, Office of Polar Programs, 10/01/05-09/30/08, $117,974, W.R. Fraser, C.A. Ribic, and E.E. Hofmann, Co-Principal Investigators.

Collaborative Research: U.S. SO GLOBEC Synthesis and Modeling: Circulation and Hydrographic Data Analyses and Modeling Studies, National Science Foundation**,** Office of Polar Programs, 10/01/05-09/30/08, $334,691, E.E. Hofmann, J.M. Klinck, R. Beardsley, R. Limeburner, B. Owens, L. Padman, and W. Smith, Co-Principal Investigators.

Collaborative Research: Field and Modeling Studies in Support of Understanding Disease Resistance in Estuarine Populations and Response to Climate Change, National Science Foundation, Division of Ocean Sciences, 09/1/06-08/31/09, $324,903, E.E. Hofmann, J.M. Klinck, E.N. Powell, S.E. Ford, D. Bushek, X. Guo, D.B. Haidvogel, and J. Wilkin, Co-Principal Investigators.

The Oyster Disease Research Program: The Influence of Disease on Oyster Generation Time and Implications for Fecundity and Habitat Maintenance, National Oceanic and Atmospheric Administration, 06/01/07-05/31/10, $150,143, E.E. Hofmann, J.M. Klinck, R. Mann, E.N. Powell, D. Hedgecock, Co-Principal Investigators.

Third GLOBEC Open Science Meeting: Support and Facilitation, National Science Foundation, Office of Polar Programs, 01/01/09-12/31/09, $20,000, E. Hofmann, Principal Investigator.

U.S. Eastern Continental Shelf Carbon Cycling (USECoS): Modeling, Data Assimilation, and Analysis, NASA Carbon Cycle Science, 05/05/08-04/30/11, $191,400, Friderichs, Hofmann, and Others, Co-Principal Investigators.

Collaborative Research: GLOBEC Pan Regional Synthesis: End-to-End Budgets in US-GLOBEC Regions, National Science Foundation Ocean Sciences, 09/01/08-08/31/11, $273,468, D. Gifford, J. Steele, E. Hofmann and Others, Co-Principal Investigators.

Collaborative Research: Seasonal Evolution of Chemical and Biological Variability in the Ross Sea, National Science Foundation Office of Polar Programs, 08/15/09-07/31/11, $197,814, W. Smith, M. Friedrichs, E. Hofmann, J. Klinck, M. Dinniman, Co-Principal Investigators.

Collaborative Research: Weddell Seals as Autonomous Sensors of the Winter Oceanography of the Ross Sea, National Science Foundation Office of Polar Programs, 07/01/09-06/30/13, $246,960, D. Costa, J. Burns, J. Klinck, M. Dinniman, E. Hofmann, Co-Principal Investigators.

CNH: Collaborative Research: Climate Change and Responses in a Coupled Marine System, National Science Foundation Coupled Natural and Human Systems, 10/01/09-09/30/12, $300,000, B. McCay, S. Brandt, R. Mann, E. Powell, E. Hofmann, J. Klinck, Co-Principal Investigators.

CAMEO: Building the Foundation: An End-to-End Modeling Workshop, National Oceanic and Atmospheric Administration, 06/01/09-05/31/11, $40,921, D. Gifford, J. Steele, K. Aydin, E. Hofmann, Co-Principal Investigators.

Third GLOBEC Open Science Meeting: Support and Facilitation, National Science Foundation, Office of Polar Programs, 01/01/2009 to 12/31/2009, $20,000, E. Hofmann, Principal Investigator.

Impacts of Changing Climate and Land Use on Carbon Cycling and Budgets of the Coastal Ocean Margin: Observations, Analysis, and Modeling, NASA, 02/01/2011 to 01/31/2015, $141,671 (ODU subaward), Friedrichs, Hofmann and Others, Co-Principal Investigators.

Collaborative Research: Impact of Mesoscale Processes on Iron Supply and Phytoplankton Dynamics in the Ross Sea, National Science Foundation, Office of Polar Programs, 07/01/2011 to 06/30/2016, $325,834 (ODU component), Hofmann, Klinck, Dinniman, Co-Principal Investigators.

Development of a Theoretical Basis for Modeling Disease Processes in Marine Invertebrates, National Science Foundation, Evolution and Ecology of Infectious Diseases Program, 06/15/2012 to 05/31/2016, $1,280,133, Hofmann, Klinck and Others, Co-Principal Investigators.

Synergistic impacts of population growth, urbanization, and climate change on watershed and coastal ecology of the northeastern United States, NASA Interdisciplinary Science, 03/19/2014 to 03/18/2019, $127,907 (ODU subaward), Najjar, Friedrichs, Hofmann and Others, Co-Principal Investigators.

FL DEP Expert Analysis, Florida Department of Environmental Protection, 05/14/14 to 06/30/2015, $128,155, Hofmann, Principal Investigator.

Consortium for Oil Spill Exposure Pathways in Coastal River-Dominated Ecosystems (CONCORDE), Gulf of Mexico Research Initiative, 01/01/2015 to 12/31/2019, $578,724 (ODU subaward), Hofmann, Principal Investigator.

CHRP2016: Predicted impacts of climate change on the success of alternative management actions in the Chesapeake Bay: using multiple community models in support of hypoxia management decision-making, NOAA, 09/01/2016 to 08/31/2021, $229,119 (ODU subaward), Hofmann, Principal Investigator.

Lower James River Estuary Project: The Relationship Between Surface Chlorophyll a distributions, Dinoflagellate abundance and Specification, and Depth-Integrated Chlorophyll Concentrations, Hampton Roads Sanitation District Commission 07/01/2017 to 06/30/2018, $50,005, Mulholland, Hofmann, Klinck, Co-Principal Investigators.

IMBeR IMBIZO V Workshop: Management Strategy Evaluation: Achieving Transparency in Natural Resource Management by Quantitatively Bridging Social and Natural Science Uncertainties, Asia-Pacific Network for Global Change Research, 08/1/2017 to 07/31/2018, $25,000, Hofmann, Principal Investigator.

Development and Implementation of Workshops to Facilitate Capacity in Ocean Circulation, Ecosystem and Management Strategy Evaluation Modeling, National Science Foundation, Polar Special Initiatives, 08/01/2017 to 07/31/2020, $49,900, Hofmann, Principal Investigator.

Collaborative Research: Elucidating Environmental Controls of Productivity in Polynyas and the Western Antarctic Peninsula, National Science Foundation, Office of Polar Programs, 09/15/2017 to 08/31/2020, $252,000, Hofmann and Dinniman, Principal Investigators.

Presentations at Professional Meetings (since 2013; *denotes invited):

Hofmann, E.E. and Others, A Coupled Model of Economics, Human Behavior, and Bivalve Biology: Application to the Surfclam Fishery, IMBER IMBIZO III, Goa, India, 28-31 January 2013.

Hofmann*, E.E., Productivity and linkages in Southern Ocean food webs: Comparisons and implications, Ocean Carbon and Biogeochemistry Summer Workshop, Woods Hole, MA 22-25 July 2013.

Hofmann, E.E., D. Bushek, S. Ford, X. Guo, D. Munroe, T. Ben-Horin, E. Powell, D. Haidvogel, J. Levin, J. Klinck, Development of a Theoretical Basis for Modeling Disease Processes in Marine Invertebrates, oral presentation, Ocean Sciences Meeting, Honolulu, Hawaii, February 2014.

Hofmann, E.E., M.S. Dinniman, J.M. Klinck, W.O. Smith, Jr., The Effects of Changing Winds and Temperatures on the Oceanography of the Ross Sea in the 21st Century, oral presentation, IMBER Open Science Conference, Bergen, Norway, 23-27 June 2014.

Hofmann, E.E. and USECoS Team, Interannual Variability of Coastal Nutrient Fluxes Along the U.S. Eastern Continental Shelf (USECoS): Results from a Land-Ocean-Biogeochemical Modeling System, Fall AGU Meeting, San Francisco, CA, December 2014.

Hofmann, E.E., Host-pathogen proliferation models, RCN Marine Disease Modeling and Transmission Workshop, CCPO, Norfolk, VA, 11-15 May 2015.

Hofmann, E.E., IMBER and Future Earth, OCB Summer Workshop, Woods Hole Oceanographic Institution, Woods Hole, MA, 20-23 July 2015.

Hofmann, E.E., Projected changes and Southern Ocean food webs, oral presentation, IMBER IMBIZO IV, Trieste, Italy, 27-30 October 2015.

Hofmann, E.E., E. Svendsen, L. Maddison, A. Bundy, R. Chuenpagdee, Marine and Human Systems: Addressing Multiple Scales and Multiple Stressors, oral presentation, Ocean Sciences Meeting, New Orleans, LA, 22-26 February 2016.

Hofmann*, E.E., Modeling Southern Ocean Food Webs - Approaches and Challenges, keynote plenary presentation, ICES/PICES 6th Zooplankton Symposium, Bergen, Norway, 9-13 May 2016.

Hofmann*, E.E., E.N. Powell, J.M. Klinck, G. Bidegain, Modeling Within-host Pathogen Interactions in Marine Bivalves, invited plenary presentation, 2016 Conference on Ecology and Evolution of Infection and Disease, Cornell University, 3-5 June 2016.

Hofmann, E.E., E.N. Powell, J.M. Klinck, D.M. Munroe, R. Mann, D.B. Haidvogel, D.A. Narváez, X. Zhang, K.M. Kuykendall, Factors Affecting Distribution of the Atlantic Surfclam (*Spisula solidissima*), a Continental Shelf Biomass Dominant, During a Period of Climate Change, oral presentation, National Shellfisheries Association 109th Annual Meeting, Knoxville, TN, 26-30 March 2017.

Hofmann*, E.E., Modeling Marine Bivalve Populations: Approaches and Challenges, invited plenary presentation, National Shellfisheries Association 109th Annual Meeting, Knoxville, TN, 26-30 March 2017.

Hofmann, E.E., Models of the Ross Sea and its Linkages to the Southern Ocean, oral presentation, Southern Ocean Observing System, Ross Sea Regional Workshop, Shanghai, China, 10-13 September 2017.

Hofmann, E.E., Factors Affecting Distribution of the Atlantic Surfclam (*Spisula solidissima*), A Continental Shelf Biomass Dominant, During a Period of Climate Change, oral presentation, IMBeR IMBIZO V, Woods Hole Oceanographic Institution, Woods Hole, MA, 2-6 October 2017.

Hofmann, E.E. and USECoS Team, Transport and Fate of Nutrients along the U.S. East Coast, oral presentation, Fall AGU Meeting, New Orleans, LA, 11-15 December 2017.

Hofmann, E.E., E. Salmon, M.S. Dinniman, W.O. Smith, Jr., Evaluation of Iron Sources and Sea Ice Variability in the Ross Sea and Implications for Primary Production, Ocean Sciences Meeting, Portland, OR, 16-21 February 2018.

Hofmann*, E.E. and E.J. Murphy, Critical Questions for Understanding Southern Ocean Ecosystems: How to 'Do the Science' and Timescales for Research, invited plenary presentation, Marine Ecosystem Assessment for the Southern Ocean Conference, 9-13 April 2018, Hobart, Tasmania.

Salmon, E., E.E. Hofmann, M.S. Dinniman and W.O. Smith, Jr., Evaluation of Iron Sources and Sea Ice Variability in the Ross Sea and Implications for the Phytoplankton Seasonal Cycle, poster presentation, 4th International Symposium on The Effects of Climate Change on the World's Oceans, 2-8 June 2018, Washington, DC.

Hofmann, E.E., E.N. Powell, J.M. Klinck, D. Munroe, R. Mann, D.B. Haidvogel, D. Narváez, X. Zhnag, K. Kuykendall, Factors Affecting Distribution of the Atlantic surfclam (*Spisula solidissima*), a Continental Shelf Biomass Dominant, During a Period of Climate Change, oral presentation, 4th International Symposium on The Effects of Climate Change on the World's Oceans, 2-8 June 2018, Washington, DC.

Invited Lectures/Seminars (since 2013):

Coupling across individuals, populations and human systems in marine ecosystem models, invited lecture, CNRS Thematic School on Innovative Approaches in Marine Environment Modeling, Institut Universitaire Européen de la Mer, Brest, France, 19-23 August 2013.

Southern Ocean Food Webs - Current Understanding and Challenges, invited seminar, State Key Laboratory of Estuarine and Coastal Research, East China Normal University, Shanghai, China, 14 October 2013.

Southern Ocean Food Webs - Current Understanding and Challenges, IMCS weekly seminar, Rutgers University, 12 May 2014.

Introduction to the IMBER Open Science Conference, invited plenary presentation, IMBER Open Science Conference, Bergen, Norway, 23-27 June 2014.

Carbon cycling on the Mid Atlantic Bight continental shelf, Duke University Marine Laboratory Seminar Series, 28 January 2015.

Southern Ocean Food Webs – Approaches and Challenges, seminar, University of Southern Mississippi, 14 September 2016.

Seasonal and interannual variability of nitrogen fluxes along the Middle Atlantic Bight, seminar presentation, SEEDS Distinguished Speaker, RSMAS, University of Miami, Miami, FL, 26 April 2017.

USECoS: Seasonal and interannual variability of nitrogen fluxes along the Middle Atlantic Bight, BioSci Seminar, Virginia Institute of Marine Science, 27 November 2017.

Marine Ecosystem Modeling - Approaches and Challenges, nine lectures, Austral Summer Institute, University of Concepción, Concepción, Chile, 15-19 January 2018.

Special Sessions, Symposia, Workshops, Conferences Convened (since 2013):

Co-Convener with D. Harvell, C. Burge, special session on *Ecology of Infectious Marine Disease in a Changing Climate*, 2014 Ocean Sciences Meeting, Honolulu, HI, February 2014.

Co-Convener with M. St. John, A Planning Workshop for an International Research Program on the Coupled North Atlantic-Arctic System, Arlington, VA, April 14-16, 2014.

Co-Convener with Others, IMBER Open Science Conference, Bergen, Norway, 23-27 June 2014.

Co-Convener with R. Cavanagh, K. Reid, N. Johnston, A. Constable, E. Murphy, special session on *Detecting, projecting and managing the impacts of change in Southern Ocean ecosystems*, IMBER Open Science Conference, Bergen, Norway, 24-27 June 2014.

Co-Convener with J. Grebmeire, G. Shaver, special session on *Changing Ecosystems of the Arctic and Antarctic*, Fall AGU Meeting, San Francisco, CA, December 2014.

Co-Convener with E. Powell, RCN Marine Disease Modeling and Transmission Workshop, CCPO, Old Dominion University, Norfolk, VA, 11-15 May 2015.

Co-Convener with Ann Gargett, Grosch Symposium: The Art of Fluid Dynamics, Old Dominion University, 13-14 October 2016.

Co-Convener with E. Powell, Special session on *Modelling Marine Bivalve Diseases – Transmission and Climate Controls*, National Shellfisheries Association Meeting, Knoxville, TN, 26-30 March 2017.

Co-Convener with Others, IMBeR Open Science Conference, Brest, France, June 2019.

University Service:

Graduate Program Director, Department of Oceanography, Old Dominion University, 1990-1991

Member, Old Dominion University, College of Sciences, Dean Search Committee, 1996-1997

Member, Old Dominion University, Oceanography Department Chair Search Committee, 1998-1999

Member, Old Dominion University, Department of STEM Education and Professional Studies, Faculty Search Committee, 2009-2010

Member, Provost's and Vice President for Research's Ad-Hoc Working Group on IDC, 2012

Member, Old Dominion University, Policy for Minors Committee, 2017-2018

Coordinator, Center for Coastal Physical Oceanography Seminar Series, 1991-present

Other Professional Service:

Reviewer for:	National Science Foundation, Ocean Sciences Program
	National Science Foundation, Office of Polar Programs, Polar Biology and Medicine
	National Science Foundation, Office of Polar Programs, Arctic System Science
	National Science Foundation, Biotic Programs, LTER Advisory Panel
	National Science Foundation, Research Experiences for Undergraduates, Review Panel
	National Science Foundation, Coupled Natural Human Systems, Review Panel
	NASA, Ocean Color Program
	NASA, Oceans and Ice Program, Review Panel Member
	NASA, Interdisciplinary Science Program, Review Panel Member
	NOAA, ECOHAB Program
Journal Reviewer	*Journal of Marine Research*
	Journal of Geophysical Research

Marine Ecology Progress Series
Limnology and Oceanography
Marine Biology
Global Biogeochemical Cycles
Deep-Sea Research I and II

Community and Educational Outreach:

An overview of the Ocean, Earth and Atmospheric Sciences Department at Old Dominion University, 14 February 1999, Town-N-Gown, Norfolk, VA.

Interactive Antarctic research presentation with Kindergarten class, Fall 2001, Christ The King School, Norfolk, VA.

Boy Scouts Oceanography Merit Badge Program, bi-annual program held every May and September beginning in May 2004 until present, includes Oceanography presentation (E. Hofmann) and research cruise onboard the R/V *Fay Slover*, ~650 Boy Scouts earned merit badge at the end of 2017; Current wait list for the program includes more than 3 dozen troops and many troops request to be put back on the list while participating in their reserved program; Scouts served by the program have come from across Virginia and locations in Maryland and Pennsylvania.

Boy Scout Oceanography Merit Badge Program Expansion, organized and participated in two merit badge programs (morning and afternoon) on 31 July 2018. These extra programs are funded by the Virginia License Plate Educational Fund. This allowed an additional 50 Scouts to receive the Oceanography Merit Badge.

Organized and participated in *Oceanography Day* for Christ The King School (K-8 grades) which was final event of a year-long focus on marine science; final event included multiple stations demonstrating marine science to provide hands-on learning activities, an invited speaker and presentations of children projects; 2005-2011.

Organized and participated in field trip for 8th grade students from Christ The King School on the *R/V Fay Slover* as part of focus on marine science education, 2005-2011.

Antarctic Research, Invited presentation, Altrusa International, Tidewater Chapter, Norfolk VA, 21 March 2005.

A Career in Oceanography, Blair Middle School Career Day, 9 June 2005, Norfolk, VA (about 100 students).

Served as advisor for the Christ The King Middle School Science Club (2006-07, 2007-08, 2008-09, 2009-2010 school years). Middle School students entered the Tidewater Regional Science Fair which takes place in the Spring Semester at Old Dominion University. For the March 2007 Tidewater Science Fair, CTK science club members received Third Place and Honorable Mention awards in the Junior Division for Environmental Science.

Second grade class, Christ The King School, field trip to shoreline area of Crittenton Hall, Old Dominion University, 12 February 2007; part of Partners in Education, a multi-year partnership that was highlighted by 2nd grade outreach program that resulted in the school receiving a national award for integrating technology in the classroom.

A Career in Marine Science, Christ The King School Career Day, 27 April 2007, Norfolk, VA, about 30 students.

Antarctic Oceanography, 4th grade class presentation, Halifax Academy, Roanoke Rapids, NC, 15 May 2007, about 25 students plus teachers.

Provided organization, oversight, and presentations for marine science merit badge requirements at the 2008 Girl Scout Jamboree, 4 October 2008, Constant Center, Old Dominion University, Norfolk, VA. About 300 Girl Scouts, ranging from Brownies to Cadets, participated in the marine science merit badge programs.

School presentation, Antarctic Oceanography, Eagle Ridge Middle School, 8 May 2009, Ashburn, VA, ~273 seventh grade students and teachers.

Project SEARCH & RiverQuest (partnership with Dr. D. Dickerson, formerly of the Darden College of Education, in support of Portsmouth Public Schools, grades 8 and 9); provided hands on activities and took students on R/V *Riptide*, one week in July 2010 to 2014.

Contributed to the Boy Scout Oceanography Merit Badge Program organized by the Chesapeake NOAA office; provided learning stations with hands-on activities that demonstrate marine science and address merit badge requirements, August 2011, April 2012, April 2013, May 2014, July 2015; about 250 Scouts participated in program.

Career Day presentation on marine science, ~55 students (grades 11 and 12), Halifax Academy, Roanoke Rapids, NC, March 2012.

AAUW STEM4Girls Conference for Middle School Girls and their Parents, Tidewater Community College, Virginia Beach, VA, March 2014 to 2018; provide 3 to 4 workshops for girls and parents that teach about the Chesapeake Bay watershed and its ecology.

Organized field trip for 8th grade students from St. Pius X School on the *R/V Fay Slover*, May 2014.

Virginia Science Technology Engineering and Applied Mathematics (STEAM) Academy, July 6-12, 2014; provided presentation to 50 students (6th-8th grades) on Chesapeake Bay watershed and ecology.

Organized middle school field trip on the R/V *Fay Slover* for Roadstead Montessori High School of Hampton Roads, April 2015; provided various presentations on marine science for students and faculty.

Organized and participated in 8th grade field trip on the R/V *Fay Slover* for students from St. John the Apostle School, Virginia Beach, VA, May 2016 (about 30 students).

Organized and participated in STREAM Expo, St. John the Apostle School (grades K-8, ~300 students and faculty), Virginia Beach, VA; final event of a year-long focus on marine science that included multiple stations demonstrating marine science to provide hands-on learning activities, provided presentation to school on Antarctic research, May 2017.

Organized and participated in *Under the Sea Marine Camp* as part of the Old Dominion University Big Blue Summer Camp Program; provided educational outreach programs for ~75 campers (ages 6-14) that included marine science-based stations and a beach field trip, 26-30 June 2017.

Organized and participated in STREAM Expo, St. John the Apostle School (grades K-8, ~300 students and faculty), Virginia Beach, VA; final event of a year-long focus on marine science that included multiple stations demonstrating marine science to provide hands-on learning activities, provided presentation to school on Antarctic research, May 2018.

Organized and participated in 8th grade field trip on the R/V *Fay Slover* for students from St. John the Apostle School, Virginia Beach, VA, May 2018 (about 35 students).

Organized and participated in *Chesapeake Bay, Beaches & Critters Camp* as part of the Old Dominion University Big Blue Summer Camp Program; provided educational outreach programs for ~68 campers (ages 6-12) that included marine science-based stations, hands-on activities on the R/V *Fay Slover*, and a beach field trip, 18-22 June 2018.