

## John Marra

Nationality: U.S. Citizen  
Present Position: Professor, Department of Earth & Environmental Sciences  
Brooklyn College of the City University of New York  
2900 Bedford Avenue, Brooklyn, NY 11210  
tel: 718-951-5000x2594 email: jfm7780@brooklyn.cuny.edu

### EDUCATION:

B.S., Zoology Oregon State University 1968  
Ph.D., Biological Oceanography Dalhousie University 1977

### POSITIONS AND EXPERIENCE:

Commissioned Officer, USN, Honorable Discharge 1968-1972  
Graduate Research Assistant, Dalhousie University 1972-1977  
Teaching Assistant, Dalhousie University 1976  
Post-Doctoral Fellow, Lamont-Doherty 1977-1979  
Research Associate, Lamont-Doherty 1979-1983  
Research Scientist, Lamont-Doherty 1983-1986  
Senior Research Scientist, Lamont-Doherty 1986-1987  
Doherty Senior Research Scientist, Lamont-Doherty 1987-1999  
Associate Director for Oceans and Climates, Lamont-Doherty 1991-1992  
Doherty Senior Research Scholar, Lamont-Doherty 1999-2007  
Program Scientist, NASA Headquarters (IPA) 1999-2001  
Associate Director for Biology and Paleo Environment, Lamont-Doherty 2001-2007  
Professor, Dept. Earth & Environ. Sciences, Brooklyn College 2007-  
Director, Aquatic Research and Environmental Assessment Center 2007-  
CUNY Doctoral Faculty, Earth and Environmental Sciences 2007-  
CUNY Doctoral Faculty, Biology 2010-

28 Oceanographic Cruises (11 as Chief Scientist)

### AWARDS:

Earth Science Enterprise Terra Award, NASA, 2000  
NASA Exceptional Achievement Medal, 2001  
Office of Earth Science Award, NASA, 2001  
Group Achievement Award, NASA, 2001

### PROFESSIONAL SOCIETIES:

American Society of Limnology and Oceanography  
American Geophysical Union  
The Oceanography Society

### PUBLICATIONS:

- 2015 Phytoplankton Bloom Phenomena in the North Atlantic Ocean and Arabian Sea. ICES Journal of Marine Systems (in press) (J. F. Marra, T. D. Dickey, A. J. Plueddemann, R. A. Weller, C. S. Kinkade, M. Stramska).
- 2014 Resolving the Ocean's Euphotic Zone. Deep-Sea Research I 83, 45-50 (J. F. Marra, V. P. Lance, R. D. Vaillancourt, B. R. Hargreaves).

- Light-mediated release of dissolved organic carbon by phytoplankton. *Journal of Marine Systems* doi:10.1016/j.jmarsys.2014.02.008 (J. Cherrier, SK, Valentine, B. Hamill, W. H. Jeffrey, **J. F. Marra**)
- Ocean productivity: A personal perspective since the first Liege Colloquium. *Journal of Marine Systems* doi: 10.1016/j.jmarsys.2014.01.012 (**J. F. Marra**)
- Introduction to Satellite Oceanography. ASLO eLectures doi:10.4319/lol.2014.jmarra.6 (**J. F. Marra**)
- Nitrogen Availability and Light Intensity Control Photosynthetic Maximum Quantum Yield in the Stratified Western North Atlantic Ocean. *Deep-Sea Research I* (submitted) (R. D. Vaillancourt, **J. Marra**, V. P. Lance, B. R. Hargreaves)
- Estimating oceanic primary productivity from ocean color remote sensing: a status assessment *Journal of Marine Systems* (in press) (Z. P. Lee, **J. Marra**, M. J. Perry, S. Sathyendranath, M. Kahru)
- 2012 Comment on “Measuring primary production rates in the ocean: Enigmatic results between incubation and non-incubation methods at Station ALOHA, by Quay et al.” *Global Biogeochemical Cycles* 26, 2, doi:10.1029/2011GB004087 (**J. Marra**)
- Primary productivity, new productivity, and their relation to carbon flux during two Southern Ocean Gas Exchange tracer experiments. *Journal of Geophysical Research* 117, C00f14. doi:10.1029/2011JC007687 (V. P. Lance, P. Strutton, R. D. Vaillancourt, B. R. Hargreaves, J.-Z. Zhang, **J. Marra**)
- Potential grazing effects in incubations with <sup>14</sup>C. *Aquatic Biology* 14, 283-288. (**J. Marra**, V. Montecino, E. Capuzzo)
- 2011 An evaluation of ocean color model estimates of marine primary productivity in coastal and pelagic regions across the globe. *Biogeosciences* 8, 489-503 (V. S. Saba and 21 others)
- 2010 The challenges of modeling depth-integrated marine primary productivity over multiple decades: A case study at BATS and HOT. *Global Biogeochemical Cycles* 24, GB3020, doi:10.1029/2009GB003655 (V. S. Saba and 42 others)
- 2009 Net and gross productivity: weighing in with <sup>14</sup>C. *Aquatic Microbial Ecology* 56, 123-131 (**J. Marra**)
- Short-term variability in primary productivity during a wind-driven diatom bloom in the Gulf of Eilat (Aqaba). *Aquatic Microbial Ecology* 56, 205-215 (D. Iluz, G. Dishon, E. Capuzzo, E. Meeder, R. Astoreca, V. Montecino, P. Znachor, D. Ediger, **J. Marra**)
- High-resolution surveys of the biogeochemistry of the New England shelfbreak front during Summer, 2002. *Journal of Marine Systems* 78, 426-441 (Burke Hales, R. D. Vaillancourt, L. Prieto, **J. Marra**, R. Houghton, D. Hebert)
- Monsoons, islands and eddies: their effects on phytoplankton in the Indian Ocean, pp 57-70. In: *The Biogeochemistry of the Indian Ocean*. American Geophysical Union, Washington, DC. (**J. Marra** and T. S. Moore II)
- Turbulent supply of nutrients to phytoplankton at the New England shelfbreak front, *Journal of Geophysical Research* 114, C05010, doi:10.1029/2008JC005011 (B. Hales, D. Hebert, **J. Marra**).
- Assessing the Uncertainties of Model Estimates of Primary Productivity in the Tropical Pacific Ocean. *Journal of Marine Systems* 76, 113-133. (Friedrichs, M. A. M. and 34 others)
- Cross-shelf circulation and phytoplankton distribution at the summertime New England shelfbreak front, *Journal of Marine Systems* 78, 411-425 (R. W. Houghton, R. D. Vaillancourt, **J. Marra**, D. Hebert, B.

Hales)

- 2008 On the relationship between carbon fixation efficiency and bio-optical characteristics of phytoplankton, *Journal of Plankton Research* 30, 43-56 (L. Prieto, R. D. Vaillancourt, B. Hales, **J. Marra**).
- 2007 Phytoplankton absorption: a strong indicator of primary productivity in the surface ocean. (**J. Marra**, C. C. Trees, J. E. O'Reilly) *Deep-Sea Research I* 54, 153-163.
- Phytoplankton variability off the Western Australian Coast: Mesoscale eddies and their role in cross-shelf exchange, *Deep-Sea Research II* 54, 943-960 (T. S. Moore II, R. J. Matear, **J. Marra**, L. Clementson)
- 2006 Monsoonal forcing and biogeochemical environments of Outer Southeast Asia Seas, Chapter 18, pp. 673-721. In: *The Sea, Volume 14, The Global Coastal Ocean: Interdisciplinary regional studies and Syntheses*. Edited by A. Robinson. Wiley Interscience (K. K. Liu, S.-Y. Chao, **J. Marra**, and A. Snidvongs)
- Ocean color variability in the Indonesian Seas during the SeaWiFS era. *Geochemistry Geobiology and Geosystems*, vol. 7, no. 5 Q05021, doi:10.1029/2005GC001009 (R. D. Susanto, **J. Marra** and T. S. Moore II)
- A comparison of global estimates of marine primary production from ocean color. *Deep-Sea Research II* 53, 741-770 (M.-E. Carr, and 37 others)
- 2005 Primary productivity in the Arabian Sea: A synthesis of JGOFS data. *Progress in Oceanography* 65, 159-175 (**J. Marra** and R. T. Barber)
- Light absorption by phytoplankton and CDOM at the New England shelfbreak front in summer. *Geochemistry Geobiology and Geosystems* 6, Q11003, doi:10.1029/2005GC000999 (R. D. Vaillancourt, **J. Marra**, L. Prieto, R. W. Houghton, B. Hales, D. Hebert)
- Effect of the 1997/1998 El Nino on chlorophyll a variability along the southern coasts of Java and Sumatra. *Oceanography* 18, 124-127 (R. D. Susanto and **J. Marra**)
- 2004 Views of Ocean Processes from the Sea-viewing Wide Field-of-view Sensor (SeaWiFS) Mission: Introduction to the First Special Issue. *Deep-Sea Research II* 51, 1-4 (D. A. Siegel, A. C. Thomas, **J. Marra**)
- The compensation irradiance for phytoplankton in nature. *Geophysical Research Letters* 31, L06305, doi:10.1029/2003GL018881 (**J. Marra**)
- Phytoplankton and heterotrophic respiration in the surface layer of the ocean. *Geophysical Research Letters* 31, No. 9, L0931410.1029/2004GL019664 (**J. Marra** and R. T. Barber)
2003. Primary productivity and in situ quantum yields in the Ross Sea and Pacific sector of the Antarctic Circumpolar Current. *Deep-Sea Research II* 50, 559-578 (R.D. Vaillancourt, **J. Marra**, R.T. Barber, and W.O. Smith, Jr.)
- <sup>14</sup>C uptake by phytoplankton, now and in the future. *Limnology and Oceanography Bulletin* 12(1), 1-3 (**J. Marra**)
- Impact of a cyclonic eddy on phytoplankton community structure and photosynthetic competency in the subtropical North Pacific Ocean. *Deep-Sea Research I* 50, 829-847 (R. D. Vaillancourt, **J. Marra**, M. P. Seki, R. R. Bidigare)

- Response of the Banda Sea to the southwest monsoon. Marine Ecology Progress Series 261, 41-49 (T. S. Moore II, **J. Marra**, A. Alkatiri)
- 2002 Approaches to the measurement of planktonic production, pp 78-108. In: *Phytoplankton productivity- an appreciation of 50 years of the study of production in oceans and lakes*. P.J. leB. Williams, D.N. Thomas and C.S. Reynolds, Eds. Blackwell Science, Cambridge, U.K. (**J. Marra**)
- Effects of upper ocean physical processes - turbulence, advection, and air-sea interaction on oceanic primary production, pp. 19-49. In: *The Sea, Volume 12: Biological-Physical Interactions in the Ocean*, A. R. Robinson, J. J. McCarthy, and B. J. Rothschild, Eds. John Wiley & Sons Inc. New York. (A. Gargett, **J. Marra**)
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- Satellite observations of bloom events in the Strait of Ombai: Relationships to monsoons and ENSO. Geochemistry Geophysics Geosystems, Vol. 3, No. 2, 10.1029/2001GC000174 (T. S. Moore and **J. Marra**)
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- 2001 Primary productivity and its regulation in the Arabian Sea during 1995. Deep-Sea Research II 48, 1127-1172 (R.T. Barber, **J. Marra**, R.R. Bidigare, L.A. Codispoti, D. Halpern, Z. Johnson, M. Latasa, R. Goericke, S.L. Smith)
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- An annual cycle of phytoplankton biomass in the Arabian Sea, 1994-1995, as determined by moored optical sensors. Deep-Sea Research II 48, 1285-1301 (C. Kinkade, **J. Marra**, T. Dickey and R. Weller)
- Biogeochemical regimes in the Ross Sea indicated by net utilization of carbon and nutrient and net production of organic carbon. Deep-Sea Research II, 47, 3369-3394 (C. Sweeney, D. Hansell, F. Millero, L. Codispoti, W. O. Smith, **J. Marra**, and T. Takahashi)
- Constraining bacterial production, conversion efficiency and respiration in the Ross Sea, Antarctica, January - February, 1997. Deep-Sea Research II 47, 3227-3248 (H.W. Ducklow, M.-L. Dickson, D.L. Kirchman, G. Steward, J. Orchardo, M.L. Bender, **J. Marra** and F. Azam)
- Vertical budgets for organic carbon and biogenic silica in the Pacific Sector of the Southern Ocean, 1996-1998. Deep-Sea Research II 49, 1645-1674 (D.M. Nelson and others)

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- 2000 Pigment absorption and quantum yield in the Arabian Sea. *Deep-Sea Research II* 47, 1279-1299 (**J. Marra**, C. Trees, R.R. Bidigare, and R.T. Barber)
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- The northeast monsoon's impact on mixing, phytoplankton biomass and nutrient cycling in the Arabian Sea. *Deep-Sea Research II* 47, 1353-1385 (J.D. Wiggert, B.H. Jones, T.D. Dickey, K.H. Brink, R.A. Weller, **J. Marra** and L.A. Codispoti)
- 1999 Diel bio-optical variability in the Arabian Sea as observed from moored sensors. *Deep-Sea Research II* 46, 1813-1831 (Kinkade, C.S., **J. Marra**, T.D. Dickey, C. Langdon, D.E. Sigurdson and R. Weller)
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- A seasonal succession of physical/biological interaction mechanisms in the Sargasso Sea. *J. Marine Research* 57, 933-966. (J.D. Wiggert, T.C. Granata, T.D. Dickey, and **J. Marra**)
- 1998 Variability in primary production as observed from moored sensors in the central Arabian Sea in 1995. *Deep-Sea Research II* 45, 2253-2267 (**J. Marra**, T.D. Dickey, C. Ho. C.S. Kinkade, D.E. Sigurdson, R. Weller, R.T. Barber)
- Seasonal variability of bio-optical and physical properties in the Arabian Sea: October 1994-October 1995. *Deep-Sea Research II* 45, 2001-2025 (T. D. Dickey, **J. Marra**, D. E. Sigurdson, R. A. Weller, C. S. Kinkade, S. E Zedler, J. D. Wiggert and C. Langdon)
- Particulate organic carbon fluxes: Results from the U.S. JGOFS Arabian Sea Process Study. *Deep-Sea Research II* 45, 2489-2501 (C. Lee, D. W. Murray, R. T. Barber, K. O. Buessler, J. Dymond, J. I. Hedges, S. Honjo, S. J. Manganini, **J. Marra**, C. Moser, M. L. Peterson, W. L. Prell and S. G. Wakeham)
- Seasonal response of mesozooplankton to monsoonal reversals in the Arabian Sea. *Deep-Sea Research II* 45, 2369-2403 (S. L. Smith, M. Roman, K. Wishner, M. Gowing, L. Codispoti, R. T. Barber, **J. Marra**, I. Prusova, C. Flagg)
- 1997 Primary production and irradiance during an intermonsoon cruise to the Arabian Sea, November, 1995. in *Ocean Optics XIII*, S. G. Ackleson, R. Frouin, Eds., Proc. SPIE 2963, 302-307 (**J. Marra**, R. T. Barber, C. Trees, Z. Johnson and C. Kinkade)
- Ground-truthing modeled  $k_{\text{PAR}}$  and on deck primary productivity incubations with *in situ* observations. *In Ocean Optics XIII*, S.G. Ackleson, R. Frouin, Eds., Proc. SPIE 2963, 834-839 (R. T. Barber, L. Borden, Z. Johnson, **J. Marra**, and C. Trees)
- Monsoonal differences in phytoplankton biomass and production in the Indonesian Seas: tracing vertical mixing using temperature. *Deep-Sea Research* 44, 581-592 (C. Kinkade, **J. Marra**, C. Langdon, C. Knudson and A.G. Ilahude)

- One-year moored observations of the Arabian Sea Monsoons. EOS 78, 117,120-121 (D. Rudnick, R.A. Weller, C. Eriksen, T. D. Dickey, **J. Marra**, and C. Langdon)
- Analysis of diel variability in chlorophyll *a* and particulate attenuation. Journal of Marine Research 55(4), 767-784 (**J. Marra**)
- 1996 Estimating primary production at depth from remote sensing. Applied Optics 35, 463-474 (Z.P. Lee, K. L. Carder, **J. Marra**, R. Steward and M. J. Perry)
- Biogeochemical Cycling in the Ross Sea: An introduction. Journal of Geophysical Research 101, 18,453-18,454 (**J. Marra**)
- 1995 Primary production in the North Atlantic Ocean: Scaling, measurements, and optical determinants. Phil. Trans. Royal Society Lond. B 348, 153-160 (**J. Marra**)
- Production and respiration in the 1989 North Atlantic spring bloom: an analysis of irradiance-dependent changes. Deep-Sea Research 42, 553-576 (J. Kiddon, M. Bender and **J. Marra**)
- Primary production, water column changes and the demise of a *Phaeocystis* bloom at the ML-ML site in the northeast Atlantic Ocean. J. Geophysical Research 100, 6633-6643 (**J. Marra**, C. Langdon, and C. Knudson)
- Measurements of net and gross O<sub>2</sub> production, dark respiration and <sup>14</sup>C assimilation at the ML-ML mooring in the northeast Atlantic Ocean. J. Geophysical Research 100, 6645-6653 (C. Langdon, **J. Marra**, and C. Knudson)
- Bio-optical variability associated with phytoplankton dynamics in the North Atlantic during spring and summer of 1991. J. Geophysical Research 100, 6621-6632 (M. Stramska, T.D. Dickey, **J. Marra**, A. Plueddemann, C. Langdon and R. Weller)
- The vertical structure of the upper ocean during the Marine Light-Mixed Layer Experiment. J. Geophysical Research 100, 6605-6619 (A. J. Plueddemann, R. Weller, M. Stramska, T. D. Dickey, and **J. Marra**)
- Calculated quantum yield of phytoplankton at high latitudes. J. Geophysical Research 100, 6655-6653 (K. L. Carder, Z. Lee, **J. Marra**, R. Steward, and M. J. Perry)
- Bioluminescence and optical variability in the ocean: An overview of the Marine Light-Mixed Layers program. J. Geophysical Research 100, 6521-6525 (**J. Marra**)
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- Bio-optical and physical variability in the sub-arctic North Atlantic Ocean during the spring of 1989, Journal of Geophysical Research 99, 22,541-22,556. (Dickey, T., **J. Marra**, M. Stramska, C. Langdon, Granata, R. Weller, A. Plueddemann, J. Yoder)
- A simple new formulation for photoadaptation and an application in a wind-driven mixed-layer model. Marine Ecology Progress Series 111, 143-153 (P. J. S. Franks and **J. Marra**)
- Phytoplankton production in the Sargasso Sea as determined using deep sea optical mooring data. J. Geophysical Research 99, 18,385-18,402 (K. J. Waters, R. C. Smith, and **J. Marra**)

- The question of a nutrient effect on the bio-optical properties of phytoplankton. *Ocean Optics XII*, Proc. SPIE vol. 2258, pp. 152-162 (**J. Marra** and R. R. Bidigare)
- Early-spring export of phytoplankton production in the Northeast Atlantic Ocean. *Mar Ecology Progress Series* 114, 197-202 (C. Ho and **J. Marra**)
- 1993 Initiation of the spring bloom in the Northeast Atlantic Ocean (47°N/20°W): A numerical simulation. *Deep-Sea Research* 40, 55-73 (**J. Marra** and C. Ho)
- Primary production at 47°N/20°W: A comparison between the <sup>14</sup>C incubation method and mixed layer carbon budget observations. *Deep-Sea Research* 40, 151-169 (D. Chipman, **J. Marra**, and T. Takahashi)
- Seasonal variability of bio-optical and physical properties in the Sargasso Sea. *J. Geophysical Research* 98, 865-898 (T. Dickey, T. Granata, **J. Marra**, C. Langdon, J. Wiggert, Z. Chai, M. Hamilton, J. Vasquez, M. Stramska, R. Bidigare, and D. Siegel)
- Proportionality between in situ and bio-optical estimates of carbon assimilation in the Gulf of Maine in summer. *Limnology and Oceanography* 38, 231-238 (**J. Marra**, W.S. Chamberlin, and C. Knudson)
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- 1992 Global surveys of bio-optical properties in the ocean. *EOS, Trans. Amer. Geophysical Union* 72, 577ff (**J. Marra**, T. D. Dickey, and J. Mueller)
- The estimation of seasonal primary production from moored optical sensors in the Sargasso Sea. *J. Geophysical Research* 97, 7399-7412 (**J. Marra**, T. Dickey, W. S. Chamberlin, C. Ho, T. Granata, D.A. Kiefer, C. Langdon, R. Smith, K. Baker, R. Bidigare, and M. Hamilton)
- Estimation of photosynthetic rate from measurements of natural fluorescence: analysis of the effects of light and temperature. *Deep-Sea Research* 39, 1695-1706 (W.S. Chamberlin and **J. Marra**)
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- Diurnal variability in chlorophyll fluorescence: observations and modeling. *Proc. SPIE, Vol. 1750, Ocean Optics XI, Vol. 1750*, pp. 233-244 (**J. Marra**)
- 1991 Book Review: *Polar Oceanography, Part B.*, Ed. by W. O. Smith, Jr. *Bulletin of the American Meteorological Society* 72, 639-639.
- Concurrent high resolution bio-optical and physical time series observation in the Sargasso Sea during spring of 1987. *Journal of Geophysical Research* 95, 8643-8663 (T. Dickey, **J. Marra**, T. Granata, C. Langdon, M. Hamilton, J. Wiggert, D. Siegel, and A. Bratkovich)
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- Evidence for phytoplankton community succession and chromatic adaptation in the Sargasso Sea during springtime, 1985. *Marine Ecology Progress Series* 60, 113-122 (R. R. Bidigare, **J. Marra**, D. A. Kiefer, R. Iturriaga, and H. Pak)
- Phytoplankton distribution and growth at the shelf-break front in the Middle Atlantic Bight. *Journal of Marine Research* 48, 851-868 (**J. Marra**, R. W. Houghton and C. Garside)
- Meridional variations of the springtime phytoplankton community in the Sargasso Sea. *Journal of Marine Research* 48, 379-412. (D. A. Siegel, R. Iturriaga, R. R. Bidigare, R. C. Smith, H. Pak, T. D. Dickey, **J. Marra**, and K. S. Baker)
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- Bioluminescence and optical variability in the Sea. A photon budget for the upper ocean. *Limnology and Oceanography* 34, 1673-1693 (R. Smith, **J. Marra**, M. J. Perry, E. Swift, K. S. Baker, E. Buskey and D. A. Kiefer)
- 1988 Time course of C assimilation and microbial food-web. *Journal of Experimental Marine Biology Ecology* 115, 263-280 (**J. Marra**, L. W. Haas and K. R. Heinemann)
- Temporal and spatial variability of chroococcoid cyanobacteria (*Synechococcus* spp.): Specific growth rates and contribution to primary production in the Sargasso Sea. *Marine Ecology Progress Series* 44, 175-181 (R. Iturriaga and **J. Marra**)
1987. Primary production and plankton distribution at the site of the Sediment Trap Intercomparison Experiment (Panama Basin). *Bulletin of Marine Science* 40, 255-270 (**J. Marra**, P. H. Wiebe, J. C. Stepien, and J. K. B. Bishop)
- A comparison of four methods for the determination of planktonic community metabolism. *Limnology and Oceanography* 32, 1085-1098 (M. Bender, K. Grande, K. Johnson, **J. Marra**, P. J. Le B. Williams, J. Sieburth, M. Pilson, C. Langdon, G. Hitchcock, J. Orchardo, P. Donaghay, and K. Heinemann)
- Primary production in the North Pacific Central Gyre: some new measurements based on  $^{14}\text{C}$ . *Deep-Sea Research* 34, 1821-1829 (**J. Marra** and K.R. Heinemann)
- Optical characterization of primary production in the Sargasso Sea. *Global Biogeochemical Cycles* 1, 171-186 (R.R. Bidigare, R.C. Smith, K.S. Baker, and **J. Marra**)
- The measurement of gross planktonic production. *Nature* 325, 738 (P.J. leB. Williams and **J. Marra**)
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- 1985 Observations of three dimensional flux in the surface mixed layer of the ocean. Science 227, 1552-1556 (R. Weller, J. Dean, **J. Marra**, J. Price, E. Francis and D. Boardman)
- Observed and predicted measurements of photosynthesis in a phytoplankton culture exposed to natural irradiance. Marine Ecology Progress Series 24, 43-50 (**J. Marra**, K. Heinemann and G. Landriau, Jr.)
- Short-term variations in Pmax under natural conditions: a model and its implications. Marine Ecology Progress Series 26, 113-124 (P.J. Neale and **J. Marra**)
- 1984 A comparison between noncontaminating and conventional incubation procedures in primary production measurements. Limnology and Oceanography 29, 389-392 (**J. Marra** and K. Heinemann)
- High phytoplankton growth and production rates in oligotrophic Hawaiian coastal waters. Limnology and Oceanography 29, 1121-1127 (E. A. Laws, D. G. Redalje, L. W. Haas, P. K. Bienfang, R. W. Eppley, W. G. Harrison, D. M. Karl, and **J. Marra**)
- Variations in primary production and particulate carbon flux through the base of the euphotic zone at the site of the Sediment Trap Intercomparison Experiment (Panama Basin). Journal of Marine Research 42, 189-206 (J. K. B. Bishop and **J. Marra**)
- Biowatt: A study of bioluminescence and optical variability in the sea. EOS 65, 732-733 (**J. Marra** and E. O. Hartwig)
- Late winter chlorophyll *a* distributions in the Weddell Sea. Marine Ecology Progress Series 19, 197-205 (**J. Marra** and D. C. Boardman)
- 1983 Physical/Biological structure and exchange across the New York Bight thermocline shelf/slope front. Journal of Geophysical Research 88, 4467-4481 (R. W. Houghton and **J. Marra**)
- Observations on the degradation of organic material in the deep ocean and the possible effect on sediment trap fluxes. Journal of Marine Research 41, 195-214 (W. D. Gardner, K. R. Hinga, and **J. Marra**)
- Phytoplankton production in oligotrophic waters: measurements by the <sup>14</sup>C and oxygen techniques. Nature 305, 49-50. (P. J. leB. Williams, K. R. Heinemann, **J. Marra**, and D. A. Purdie)
- 1982 Marine Biological Sampling. McGraw-Hill Encyclopedia of Science and Technology, 5th Ed. pp. 131-135 (**J. Marra**)
- Phytoplankton photosynthesis and short-term sunlight variability. Limnology and Oceanography 27, 1141-1153 (**J. Marra** and K. Heinemann)
- Variability in surface chlorophyll *a* at a shelf-break front. Journal of Marine Research 40, 575-591 (**J. Marra**, R. W. Houghton, D. C. Boardman, and P. J. Neale)
- Sea ice and water column plankton distributions in the Weddell Sea in late winter. Antarctic Journal of the United States 17, 111-112 (**J. Marra**, L. H. Burckle, and H. W. Ducklow)
- Book review: Physiological Bases of Phytoplankton Ecology, Ed. by T. Platt. Science 218: 782-783.
- 1981 Tracer kinetics and phytoplankton rate processes in oligotrophic oceans. Marine Biology Letters 3, 215-223 (**J. Marra**, G. Landriau, Jr., H. W. Ducklow)

Book review: Algae Biomass: Production and Use, Ed. by G. Shelef and C. J. Soeder. Quarterly Review of Biology 56, 496-497.

- 1980 Time course of light adaptation in marine diatom. Marine Biology Letters 1, 175-183. (**J. Marra**)
- Effects of vertical mixing on primary production. pp 121-137. In: Brookhaven Symposium on Biology, "Primary Productivity in the Sea" Ed. by P.G. Falkowski; Plenum Press, NY (**J. Marra**)
- 1978 Effects of short-term variations in light intensity on photosynthesis in a marine phytoplankter: A laboratory simulation study. Marine Biology 46, 181-202 (**J. Marra**)
- Phytoplankton photosynthetic response to vertical movement in a mixed layer. Marine Biology 46, 203-208. (**J. Marra**)
- A laboratory device for the simulation of the diurnal variation in sunlight intensity. Journal of the Fisheries Research Board Canada 35, 1152-1154. (C.M. Boyd and **J. Marra**)
- 1977 Plankton dynamics and nutrient cycling on the Scotian Shelf. Journal of the Fisheries Research Board, Canada 34, 1004-1018. (R.O. Fournier, **J. Marra**, R. Bohrer, and M. Van Det)
- 1976 A brief summary of the oceanographic conditions of the Scotian Shelf with special reference to summer conditions. In: Anoxia on the Middle Atlantic Shelf during summer, pp. 39-45. Ed. by J. Sharp; Report of an IDOE/NSF Workshop, Wash., D.C., 15-16 Oct., 1976 (R. O.Fournier, **J. Marra**, and R. Bohrer)

#### MANUSCRIPTS

Global primary production in the ocean: an "abyssal recipe." (**J. Marra** and C. Ho)

Estimation of some biological characteristics of ocean waters using optical data. (**J. Marra**, C. Ho. and C. Knudson)

#### DATA REPORTS AND OTHER PUBLICATIONS:

- 1983 Reports of the US-USSR Weddell Polynya Expedition, October-November, 1981. vol 2, Hydrographic Data. Lamont-Doherty Geol. Obs. of Columbia University, New York (B. Huber, J. Jennings, C.T. Chen, J. Marra, S. Rennie, P. Mele and A.L. Gordon)
- Reports of the US-USSR Weddell Polynya Expeditions, October-November 1981. vol. 3, Biology. Lamont-Doherty Geol. Obs. of Columbia University, New York, pp. 81. (J. Stepien, J. Marra, L. Burckle, and J. Morley)
- 1984 Biowatt. A study of bioluminescence and optical variability in the sea. Ed. by J. Marra, Lamont-Doherty Geological Observatory, Palisades, NY 10964, pp. 36.
- 1986 Data Directory for Biowatt I, R/V Knorr, 1-26 April 1985, Ed. by J. Marra, Lamont-Doherty Geological Observatory, Palisades, NY 10964.
- Report of Working Group on Primary Production and Remote sensing, U.S. GOFS Report No. 3, Workshop on Upper Ocean Processes, Horn Point Laboratory.
- 1988 Upper Ocean Processes. U.S. GOFS Planning Report No. 7. Ed. by H.W. Ducklow and others.
- 1989 Primary Production and Irradiance Data for U.S. JGOFS (Leg 2) ATLANTIS II (Cruise 119-4). L-DGO Technical Report 89-4 (C. Knudson, W.S. Chamberlin and J. Marra)

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- 1990 Introduction. JGOFS North Atlantic Bloom Experiment International Scientific Symposium Abstracts. NAS Washington, November 1990, JGOFS Report No. 7.
- 1991 Measuring primary production with carbon-14. U.S. JGOFS News vol. 2, no. 4 (J. Marra)
- Report of the JGOFS Task Team on Optics, SCOR, pp.36.
- Collaboration between WOCE and JGOFS on the bio-optical properties of the ocean. WOCE Newsletter No. 11, 16-18 (J. Marra)
- 1992 Capabilities and limitations of moored sensors for studying biological properties in the ocean. Summary paper for the symposium Scientific and Environmental Data Collection with Autonomous Underwater Vehicles, MIT Marine Industry Collegium, March, 1992. (J. Marra)
- 1993 Evaluation of an *in situ* fluorometer for the estimation of chlorophyll a. Lamont-Doherty Earth Observatory Technical Report LDEO-93-1, pp23+figs. (J. Marra and C. Langdon)
- The Marine Light - Mixed Layer experiment cruise and data report. WHOI Technical Report 93-33, Woods Hole Oceanographic Institution, pp. 116. (A. Pleuddemann and others)
- 1996 The Forced Upper Ocean Dynamics Experiment in the Arabian Sea. Results from the multi-variable moored sensors from deployment-1 of the WHOI mooring. LDEO Tech Report LDEO-96-5, pp. 19+figs., app. (C. Ho, C.S. Kinkade, C. Langdon, M. Maccio, and J. Marra)
- Arlindo Mixing: CTD and hydrographic data from the August 1993 and January 1994 Cruises. LDEO Tech Report LDEO-96-6, pp. 209+, (P. Mele, B.A. Huber, A.L. Gordon, A.G. Ilahude, K. Sullivan and J. Marra)
- The Forced Upper Ocean Dynamics Experiment in the Arabian Sea. Results from the multi-variable moored sensors from deployment-2 of the WHOI mooring. LDEO Tech Report LDEO-96-8, pp. 19+figs., app. (C. Ho, C.S. Kinkade, C. Langdon, M. Maccio, and J. Marra)
- 1997 Bioluminescence and optical variability in the sea (Marine Light - Mixed Layers): Moored observations in the North Atlantic Ocean. LDEO Tech. Report LDEO-97-1, pp.12+figs. (C. Ho, C. Langdon, M. Maccio, and J. Marra)
- U.S. JGOFS North Atlantic Ocean Process Study Planning Workshop Report. U.S. JGOFS Planning Office, Woods Hole Oceanographic Inst., pp. 92 (Ed. by: H.W. Ducklow, C. Goyet, and John Marra)
- Arabian Sea Mixed Layer Dynamics Experiment Data Report. WHOI-97-08, Woods Hole Oceanographic Institution, Woods Hole, MA, pp. 152. (M.F. Baumgartner, N.J. Brink, W.M. Ostrom, R.P. Trask, R.A. Weller, T.D. Dickey, and J. Marra)
- AESOPS summer process cruise assesses controls on production in the Ross Sea. JGOFS News 8(2), 1-2,15 (J. Marra)
1998. A low-cost, compact, moored spectral radiometer. LDEO Technical Report, LDEO-98-4, Lamont-Doherty Earth Observatory, Palisades, NY, pp. 20+figs. (M. Maccio and J. Marra)
- 2001 The Ocean Theme Report for IGOS. NASA HQ Publication, 35 pp. (The Ocean Theme Team)
- 2004 Reply to Moigis. Limnology and Oceanography Bulletin 13(1), 7-8.

An alternative algorithm for the calculation of primary productivity from remote sensing data. LDEO Technical Report LDEO-2003-01. 27 pp. (J. Marra, C. Ho, and C. C. Trees)

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2005 When will we tame the oceans? Nature 436, 175-176.

2006 Marine Biological Sampling, McGraw-Hill Encyclopedia of Science and Technology.

2011 Book review: *Fisheries Management: Pandemic Failure, Workable Solutions*, by G. Pontecorvo, W. Schrank. Limnology and Oceanography Bulletin, 20(1), 19-20.

2014 Bridging the salty divide: 2. Letter to the Editor, Limnology and Oceanography Bulletin, 23(1)

#### **ABSTRACTS (since 1990):**

1990 Productivity at the seasonal time scale: an optical view. EOS 71, 108 (J. Marra and others)

North Atlantic Bloom Study (JGOFS 1989, Leg 2): Nutrient and phytoplankton relationships. EOS 71, 66 (J. Marra and others)

Particle dynamics and primary production. EOS 71, 1385. (M.J. Perry and J. Marra)

The initiation of the spring bloom in the Northeast Atlantic: A numerical simulation. JGOFS North Atlantic Bloom Experiment International Scientific Symposium. NAS, Washington, Nov. 1990. JGOFS Report No. 7 (J. Marra and C. Ho)

1991 Physical/bio-optical interaction and productivity estimates from oceanic time series. Proc. Primary Productivity and biogeochemical cycles in the sea. Brookhaven Natl. Lab., Upton, NY, 2-6 June 1991. (T. Granata, J. Wiggert, M. Hamilton, T. Dickey, J. Marra and C. Langdon)

1992 Primary productivity through the ages: models and estimates from seconds to hundreds of years. ASLO 92, Aquatic Sciences Meeting. (J. Marra)

Primary production and growth in the plankton at the ML-ML site (59N/20W), May and August, 1991. EOS 73, 262 (J. Marra, C. Langdon and C. Knudson)

Bio-optical and physical variability in the northwest Atlantic Ocean south of Iceland during the spring of 1989. EOS 73, 262 (M. Stramska, T. Dickey, J. Marra, C. Langdon, R. Weller and A.J. Plueddemann)

Physical variability in the upper ocean during the Marine Light-Mixed Layer Experiment. EOS 73, 263 (A.J. Plueddemann, R.A. Weller, T. Dickey and J. Marra)

1994 Bio-optical variability associated with phytoplankton dynamics in the North Atlantic Ocean during ML-ML Experiment in 1991. EOS 75, 103 (M. Stramska, T.D. Dickey, J. Marra, C. Langdon, R. Weller and A. Plueddemann)

1995 Light absorption, photosynthesis, and growth in phytoplankton at seasonal and diel time scales. Structure and Dynamics of Oligotrophic Systems: Evolution of Concepts, organized by Research Group GDR 869, 12-13 January, Villefranche-sur-Mer, France (J. Marra)

- 1996 Bio-optical variability during the Arabian Sea Forced Upper Ocean Dynamics program. EOS 76, OS27. (C. Kinkade, J. Marra, C. Langdon, C. Ho, M. Maccio, M. Stern, T. Dickey, D. Sigurdson, M. Stramska, D. Manov and R. Weller)
- Photosynthetic parameters and primary production in the Arabian Sea, 1995. EOS 76, OS25. (J. Marra, R. Barber, E. Barber, C. Trees, S. Lindley, C. Knudson and Z. Johnson)
- Primary production in the Arabian Sea, 1995. EOS 76, OS25 (R.T. Barber, J. Marra, C. Knudson, C. Kinkade, S. Lindley, M. Hiscock, Z. Johnson and F. Chai)
- Long-term records of dissolved oxygen from oxygen sensors on a mooring in the Central Arabian Sea. (C. Langdon, C. Kinkade, J. Marra, C. Ho, M. Maccio, M. Stern, T. Dickey, D. Sigurdson, M. Stramska, D. Manov and R. Weller)
- Response of primary production to monsoonal forcing: Observations based on oxygen dynamics. EOS 76 (C. Langdon, C. Kinkade, J. Marra, T. Dickey, R. Weller and D. Rudnick)
- Primary productivity responses to the Arabian Sea monsoons. EOS 76, (R.T. Barber, J. Marra and S.L. Smith)
- 1998 Bio-optical variability in the Arabian Sea and the Gulf of Oman during British and US JGOFS Cruises (Aug 1994 - Dec 1995) Oceanography Magazine, 11(2 Suppl.), p. 34.
- Pigment absorption and primary production during the spring intermonsoon in the Arabian Sea. Oceanography Magazine, 11(2 Suppl.), p. 34.
1999. Biogeochemical regimes in the Ross Sea indicated by net utilization of carbon and nutrient and net production of organic carbon. (C. Sweeney, D. Hansell, F. Millero, L. Codispoti, W.O. Smith, J. Marra and T. Takahashi) ASLO 1999 Aquatic Sciences Meeting Abstracts, Santa Fe., NM, 1-5 February, 1999.
- 2004 The measurement of phytoplankton and heterotrophic respiration in the ocean. (J. Marra and R. T. Barber) Ocean Research Conference Abstracts, Honolulu, HI, 15-20 February, 2004
- Phytoplankton variability and the winter bloom on the western Australian Shelf: Characteristics and causes. (T. S. Moore II, J. Marra and R. J. Matear) Ocean Research Conference Abstracts, Honolulu, HI, 15-20 February, 2004
- NESPEX: Fast-repetition rate fluorometry across a shelf break front during summer. (R. D. Vaillancourt, J. Marra, L. Prieto, B. Hales), AGU Ocean Sciences Meeting, February 2004.
- On the relationships between carbon fixation efficiency and bio-optical characteristics of phytoplankton. (L. Prieto, R. D. Vaillancourt, J. Marra) Ocean Research Conference Abstracts, Honolulu, HI, 15-20 February, 2004.
- 2005 The Workshop on Respiration: A Synopsis. (J. Marra, P. Serret, E. Smith) ASLO Summer Meeting, Santiago de Compostela, Spain, 19-24 June 2005
- 2006 Phytoplankton Variability off the Western Australian Coast: Mesoscale Eddies and Their Role in Cross-Shelf Exchange (T. S. Moore II, R. J. Matear, J. Marra, L. Clementson) Ocean Sciences 2006, Honolulu, HI, February 2006
- The Biological Response to Mixing and Circulation at the Middle Atlantic Shelfbreak Front. (R. W. Houghton, J. Marra, and R. D. Vaillancourt, D. Hebert, M. Prater, B. Hales) Ocean Sciences 2006, Honolulu, HI, February 2006

Integrating Aquacultural and Ecological Sciences for Sustainable Offshore Aquaculture (J. Volpe and 14 others), World Aquaculture Society conference, Florence, Italy, May 7-11.

When will we tame the ocean? California and the World Ocean 2006, Long Beach CA, 17-20 September 2006.

2008 ON DEQUE: Optical and Nutrient-DEpendence of QUantum Efficiency. Preliminary Results from the Western North Atlantic Ocean. (Vaillancourt, R. D., V. P. Lance, J. Marra) American Geophysical Union, San Francisco.

OPAL: A new algorithm for calculating productivity from ocean-color-derived chlorophyll-a. 2. A Test of Predictability for In Situ Chlorophyll-a and Primary Productivity, Ocean Optics XIX, 6-10 October, Barga, Italy (J. Marra, K. Hyde, J. E. O'Reilly).

2009 Phytoplankton Respiration: Some new measurements based on  $^{14}\text{C}$  (J. Marra, E. Capuzzo, V. Lance, R. D. Vaillancourt) Ocean Sciences Meeting, Nice. France, January.

2010 Primary Productivity, New Productivity and Phytoplankton Assemblage Characteristics during the Southern Ocean Gas Exchange Lagrangian Tracer Experiments (V. P. Lance, P. G. Strutton, R. D. Vaillancourt, B. R. Hargreaves, J. Marra), Ocean Sciences Meeting, Portland, OR, February.

Consequences of Long-Term Changes in Density Stratification in the Surface Ocean on Physical, Biogeochemical, and Ecosystem Processes (R. D. Vaillancourt, V. P. Lance, A. Kumar, J. Marra) Ocean Sciences Meeting, Portland, OR, February.

Does density stratification control photosynthetic quantum yield at the deep chlorophyll maximum? (R. D. Vaillancourt, J. Marra, V. P. Lance), Ocean Sciences Meeting, Portland, OR, February.

2011 The role of light in phytoplankton extracellular production and bacterial consumption of dissolved organic matter: implications for coastal carbon cycling. (J. Marra, J. Cherrier, W. Jeffrey), American Society of Limnology and Oceanography, Aquatic Sciences Meeting, San Juan Puerto Rico, 13-18 February.

2012 Time scales in photoacclimation of phytoplankton in the Western Antarctic Zone. (R. D. Vaillancourt, B. R. Hargreaves, V. P. Lance, J. Marra), Ocean Sciences Meeting, Salt Lake City, February 20-24.

Resolving the depth of the ocean's productive layer. (V. P. Lance, J. Marra, R. D. Vaillancourt, B. R. Hargreaves), Ocean Carbon Biogeochemistry Meeting, Woods Hole Oceanographic Institution, July 22-24.

2013 Resolving the depth of the ocean's euphotic zone. (J. Marra, V. P. Lance, R. D. Vaillancourt, B. R. Hargreaves), Aquatic Sciences Meeting, New Orleans, February 17-22.

The chemostat hypothesis: a balance between nitrogen availability and light intensity controls photosynthetic quantum yield in the stably-stratified sea. (R. D. Vaillancourt, V. P. Lance, B. R. Hargreaves, J. Marra), Aquatic Sciences Meeting, New Orleans, February 17-22.

Ocean Productivity: A Personal Perspective. (J. Marra) Keynote presentation at the 45<sup>th</sup> Liege Coloquium, Liege, Belgium, 13-17 May.

Light-Mediated Release of Dissolved Organic Carbon by Phytoplankton: Implications for Carbon Cycling. (J. Cherrier, S.K. Valentine, B. Hamill, W. Jeffrey, J. Marra) 45<sup>th</sup> Liege Coloquium, Liege, Belgium, 13-17 May.

2014 Phytoplankton bloom phenomena from moored observations in the Iceland Basin and the Arabian Sea. (J. Marra, T. Dickey, A. J. Pleuddemann, R. A. Weller), Ocean Sciences Meeting, Honolulu, February 23-28.

Nitrogen availability and light intensity simultaneously control photosynthetic quantum yield in the stratified ocean. (R. D. Vaillancourt, J. F. Marra V. P. Lance, B. R. Hargreaves,) Ocean Sciences Meeting, Honolulu, February 23-28.

### **STUDENTS, POST-DOCTORAL FELLOWS, THESIS COMMITTEES:**

C.S. Kinkade, Ph.D. (1999), Detbra Rosales, MS (2012)

Post-Doctoral Fellows: C. Langdon (1985-1987), R. Vaillancourt (1999-2002), L. Prieto (2001-2003), P. Cermeño (2005), V. Lance (2007-2009)

Co-Advisor (with T. Takahashi) to Colm Sweeney, Ph.D.

Committee member for Z. Chase, S. Green, S. Rubin, T. S. Moore II (Univ. Tasmania), E. Rice (CUNY)

### **PROFESSIONAL SERVICE:**

#### Editorships

Associate Editor, *Journal of Geophysical Research-Oceans* (1988-2000)

Associate Editor (Productivity), *Deep-Sea Research I* (1994-present)

Editorial Board, *Limnology and Oceanography* (1983-1986)

Guest Editor, *Deep-Sea Research II*, two issues on Ocean Color (2001-2004)

Member, Faculty of 1000

Editorial Board, *Indian Journal of Marine Science* (2008-present)

Associate Editor, ASLO eLectures (2010-present)

Guest Editor, *Journal of Marine Systems*, Special Issue on the 45<sup>th</sup> Liege Colloquium

#### Program Planning, Execution

Steering Committee, Plankton Rate Processes in Oligotrophic Oceans (PRPOOS) (1981-1986)

Chief Scientist for the Office of Naval Research (ONR) Special Focus Program Bioluminescence and Optical Variability in the Sea (Biowatt) (1984-1988)

Chief Scientist for the ONR Special Focus Program Marine Bioluminescence and Upper Ocean Physics (Marine Light-Mixed Layers) (1988-1993)

Applications of Ocean Color Working Group for the International Ocean Color Coordinating Group (2001-2003)

#### Meetings, Conferences

Program Committee, JGOFS North Atlantic Bloom Symposium, 1991

Program Committee, Ocean Optics XV Meeting in Monaco, 2000

Organizer, Workshop on Respiration in Aquatic Foodwebs, Vigo, Spain, 2005

Session Co-Chair, Aquaculture, Ocean Sciences Meeting, March 2008

Co-Coordinator, Phytoplankton Group, Group for Aquatic Productivity Workshop, April 2008

Co-organizer, Jamaica Bay Symposium, October 20<sup>th</sup>, 2011

Organizing Committee, Jamaica Bay Symposium, October 20<sup>th</sup>, 2011

Organizing Committee, 45<sup>th</sup> Liege Colloquium on Ocean Dynamics

#### Committees, Science Teams (since 1990)

Chairman, JGOFS Optics Task Team (1990-1992)

Member, JGOFS North Atlantic Planning Group (1992-1996)

Member, Primary Productivity Working Group, NASA (1996-present)

Member, Director Search Committee, LDEO (1994-1996)

Leader, Ocean Theme Team for the Integrated Global Observing Strategy (helped produce the Ocean Theme Report for the IGOS Partnership) (1999-2001)  
U.S. Joint Global Ocean Flux Study (JGOFS) Steering Committee (Steering Committee Member, 1986-1989; Corresponding Member, 1990-2003)  
International Ocean Color Coordinating Group (1999-2001)  
LDEO Point of Contact for Partnership in Observations in the Global Ocean (POGO) (2002-2007)  
IOCCG Committee on Operational Oceanography (2003-2008)  
MODIS Science Team (2004-2011)  
Chair, Subcommittee on Ecosystem Aspects of Offshore Mariculture for the Group of Experts on the Scientific Aspects of Marine Protection (GESAMP) of UNESCO (2007-2008)  
Member, Group of Experts on the Scientific Aspects of Marine Protection (GESAMP) of UNESCO (2007-2009)

#### Recent Invited Talks

Discussion Meeting of the Royal Society (U.K.) on the Role of the North Atlantic in the Global Carbon Cycle, Sept. 1994  
Structure and Dynamics of Oligotrophic Ecosystems: Evolution of Concepts, Villefranche-sur-Mer, January, 1995  
Plankton Productivity: An Appreciation of 50 years of the Study of Production in Oceans and Lakes, March 2002, Bangor Wales  
Global Ocean Productivity and the Fluxes of Carbon and Nutrients: Combining Observations and Models, JGOFS Global Synthesis Working Group and the Joint European Commission (Ispra), June, 2002  
Seminar, Oregon State University, 18 October 2002  
Workshop on Respiration in Aquatic Foodwebs, 13-16 June 2005, Vigo, Spain  
Ocean Climate and Carbon Cycle Workshop, Woods Hole, July, 2005  
Ocean Carbon Biogeochemistry Workshop, Woods Hole, July 2006  
California and the World Ocean '06, Session, "Got Aquaculture? –Why Not?", Sept. 2006  
SIBER, A Workshop on Sustained Indian Ocean Biogeochemical and Ecological Research, Goa, India, October 2006  
Seminar, Old Dominion University, November, 2006  
Group for Aquatic Productivity, "Net or Gross: Weighing in with <sup>14</sup>C", 30 March-10 April 2008.  
Invited speaker, NY Nitrogen Workshop, NY SeaGrant, July 2010  
Seminar, Florida A&M University, November 2010  
Seminar, Princeton University, December 2011  
Invited speaker, New York Marine Sciences Consortium, Annual Meeting, September 2012  
Keynote speaker, 45<sup>th</sup> Liege Colloquium on Ocean Dynamics, May 2013

#### Societies

Biology Councillor, The Oceanography Society Council (1998-2002)  
eLectures Committee, ASLO (2009-2010)

#### Other

Panelist, National Science Foundation Division of Polar Programs (Antarctic Program), 1992, 1993  
Participant, NASA Round-Robin on Primary Production Algorithms (PPAR-1 in 1995, and PPAR-3 in 2002)  
Review Panel for NASA's Oceanography Program (2002, 2005, 2011)  
Review Panel for DOE (2003)  
Review Panel for NOAA/EPA (2004)  
Participant, Architects for Sustainable Aquaculture Workshop, RSMAS, U. Miami, 2-3 November 2005  
Panelist, National Science Foundation, Office of Polar Programs, 2006  
Panelist, National Science Foundation, Division of Ocean Sciences, 2006  
Panelist, National Science Foundation, Coupled Natural-Human Systems, 2012