Curriculum Vitae
Ajit Subramaniam

Current Position:
Program Directory of the Marine Microbiology Initiative, Gordon and Betty Moore Foundation, 1661 Page Mill Road, Palo Alto, CA 94304.

Education:
Ph.D. in Coastal Oceanography. December, 1995
SUNY at Stony Brook, Stony Brook, New York 11794.
Thesis Title: Optical Properties of the Marine Diazotrophic Cyanobacteria *Trichodesmium*: Applications to Remote Sensing

M.S. in Marine Environmental Science. August, 1989
SUNY at Stony Brook, Stony Brook, New York 11794.
Thesis Title: Linking Maps to Spreadsheet-based information systems.

B.Sc. (Special) in Physics. May, 1984
The American College, Madurai, India.

Previous Experience:
6/10 to 1/12 **Lamont Associate Research Professor**, Lamont Doherty Earth Observatory at Columbia University
4/10 to 6/10 **Doherty Research Scientist**, Lamont Doherty Earth Observatory at Columbia University.
1/04 to 4/10 **Doherty Associate Research Scientist**, Lamont Doherty Earth Observatory at Columbia University.
1/08 to 1/10 **Associate Program Director**, GEO/OCE/OS Biological Oceanography Program, U.S. National Science Foundation.
3/00 to 1/04 **Assistant Research Professor**, Dept. of Biological Sciences, USC, Los Angeles
3/00 to 1/04 **Assistant Research Scientist**, ESSIC, University of Maryland, College Park.
4/99 to 3/00 **Research Associate**, Dept. of Meteorology, University of Maryland, Collge Park.
9/97 to 3/00 **Assistant Research Scientist**, Chesapeake Biological Laboratory, University of Maryland Center for Environmental Studies, Solomons.
9/97 to 4/99 **Consultant**, REMSA, to NOAA/NESDIS and NOAA/CSC on Remote Sensing, Bio-optics and Algorithm evaluation for U.S. coastal waters.
9/97 to 12/05 **Consultant** to Battelle on remote sensing of water quality for monitoring the effects of a sewage outfall in Massachusetts Bay.
8/95 to 8/97 **Senior Bio-optical Scientist.** TPMC, NOAA Coastal Services Center
Task leader, TPMC Task 6 - Coastal Remote Sensing Program. Developed and managed a field program for making bio-optical measurements in U.S. coastal waters. Was responsible for purchase and maintenance of field going instruments, writing cruise reports, developing and compiling a web-browsable database of coastal bio-optical data. The primary objective of the field program was to validate algorithms for ocean color algorithms in U.S. coastal waters. Dr. J Brock.
8/91 to 8/95 **NASA Global Change Fellow, Ph.D Candidate** MSRC, SUNY at Stony Brook. Developed algorithms for identifying and quantifying *Trichodesmium* in satellite images. Studied the optical properties of *Trichodesmium.* Dr. P. Falkowski.
1/91 to 8/91 **New York SeaGrant Fellow.** NEEDS, SUNY at Stony Brook.

Developed and maintained a database for the North East Environmental Data System (NEEDS). Was responsible for collating, organizing and disseminating environmental data from Long Island Sound. Dr. H.J Bokuniewicz.

Journal Publications (papers by students/post doctoral fellows mentored indicated by *****)**:**

A. Subramaniam, C. Mahaffey, W. Johns, and N. Mahowald (2013) Equatorial upwelling enhances nitrogen fixation in the Atlantic Ocean. Geophysical Research Letters, **40**, 1–6, doi:10.1002/grl.50250

Dippner, J.W., D. Bombar, N. Loick-Wilde, M. Voss, and **A. Subramaniam** (2013) Comment on "Current separation and upwelling over the southeast shelf of Vietnam in the South China Sea" by Chen et al. Journal Of Geophysical Research: Oceans, **118**, 1–6, doi:10.1002/jgrc.20118, 2013

*Andrew, A.A., R. Del Vecchio, **A. Subramaniam**, NV. Blough (2013). Chromophoric dissolved organic matter (CDOM) in the Equatorial Atlantic Ocean: Optical properties and their relation to CDOM structure and source. Marine Chemistry. **148**, 33-43.

Paris, C.B., M. Le Hénaff, ZM. Aman, **A. Subramaniam**, J. Helgers, D-P. Wang, VH. Kourafalou, and A. Srinivasan (2012). Evolution of the Macondo Well Blowout: Simulating the Effects of the Circulation and Synthetic Dispersants on the Subsea Oil Transport. Environ. Sci. Technol. **46**, 13293−13302. dx.doi.org/10.1021/es303197h

Fishman, J., LT. Iraci, and 30 others in alphabetical order including **A. Subramaniam** (2012) The United States' Next Generation Of Atmospheric Composition And Coastal Ecosystem Measurements NASA's Geostationary Coastal and Air Pollution Events (Geo -Cape) Mission. Bulletin of the American Meteorological Society **93** (10) 1547-1566.

Luo, Y.-W., SC. Doney, and 49 others in alphabetical order including **A. Subramaniam** (2012) Database of diazotrophs in global ocean: abundance, biomass and nitrogen fixation rates. Earth Syst. Sci. Data, **4**, 47–73 doi:10.5194/essd-4-47-2012

Sohm, J.A, **A. Subramaniam**, T. Gunderson, E.J. Carpenter, and D.G. Capone (2011). Nitrogen fixation by *Trichodesmium* spp. and unicellular diazotrophs in the North Pacific Subtropical Gyre. Journal of Geophysical Research-Biogeoscience. **116**, G03002 doi:10.1029/2010JG001513

Dippner, J.W., L. Nguyen-Ngoc, H. Doan-Nhu, **A. Subramaniam** (2011) A model for the prediction of harmful algae blooms in the Vietnamese upwelling area. Harmful Algae. **10** 606-611. doi:10.1016/j.hal.2011.04.012.

*Mendez, M., **A. Subramaniam**, T. Collins, G. Minton, R. Baldwin, P. Berggren, A. Sarnblad, O.A. Amir, V.M. Peddemors, L. Karczmarski, A. Guissamulo, and H.C. Rosenbaum (2011). Molecular ecology meets remote sensing: environmental drivers to population structure of humpback dolphins in the Western Indian Ocean. Heredity. **107**, 349-361. DOI 10.1038/hdy.2011.21.

*Mendez, M., H. Rosenbaum, **A. Subramaniam**, C. Yackulic, and P. Bordino (2010). Isolation by environmental distance in cetaceans: molecular ecology of franciscana dolphins at their southern range. Molecular Ecology. **19**, 2212-2228. doi: 10.1111/j.1365-294X.2010.04647.x

*Foster, R.A., **A. Subramaniam**, Z.P. Zehr. (2009). Distribution and activity of diazotrophy in the Eastern Equatorial Atlantic (Gulf of Guinea). Environmental Microbiology, **11**(4) 741-750, doi:10.1111/j.1462-2920.2008.01796.x.

Del Vecchio, R., **A. Subramaniam**, S. Schollaert Uz, J. Ballabrera Poi, CW. Brown, and NV.

Blough. (2009) Decadal time-series of SeaWiFS retrieved CDOM absorption and estimates of CO_2 photoproduction on the continental shelf of the Eastern United States. Geophysical Research Letters, **36**, L02602, doi:10.1029/2008GL036169.

Subramaniam, A., PL. Yager, EJ. Carpenter, C. Mahaffey, K. Björkman, S. Cooley, AB. Kustka, JP. Montoya, SA. Sañudo-Wilhelmy, R. Shipe, & DG. Capone. (2008) Amazon River enhances diazotrophy and carbon sequestration in the tropical North Atlantic Ocean. Proceedings of the National Academy of Sciences. **105:**10460-10465.

Zeng, N., J-H. Yoon, J.A. Marengo, **A. Subramaniam**, C.A. Nobre, A. Mariotti, J.D. Neelin (2008). Causes and impacts of the 2005 Amazon drought. Environmental Research Letters **3** doi:10.1088/1748-9326/3/1/014002.

Cooley, S.R., V.J. Coles, **A. Subramaniam**, P.L. Yager (2007). Seasonal variations in the Amazon plume-related atmospheric carbon sink. Global Biogeochemical Cycles. **21** (GB3014), doi:10.1029/2006GB002831.

P.V. Sundareshwar and 28 others in alphabetical order including **A. Subramaniam**. (2007) Environmental Monitoring Network for India. Science. **316**:204-205.

*Foster, R.A., **A. Subramaniam**, C, Mahaffey, E.J. Carpenter, D.G. Capone, J.P. Zehr. (2007) Influence of the Amazon River plume on distributions of free-living and symbiotic cyanobacteria in the western tropical north Atlantic Ocean. Limnology and Oceanography, **52**:517-532.

*Tzortziou, M., **A. Subramaniam**, J.R. Herman, C.L. Gallegos, P.J. Neale, L.W. Harding (2007) Remote Sensing Reflectance and Inherent Optical Properties in the Mid Chesapeake Bay. Estuarine, Coastal and Shelf Science. doi:10.1016/j.ecss.2006.09.018.

Shipe, R. F., J. Curtaz, **A. Subramaniam**, E.J Carpenter, D.G. Capone (2006). Diatom biomass and productivity in oceanic and plume influenced waters of the western tropical Atlantic ocean. Deep Sea Research Part I. Vol. **53** 1320-1334.

Lutz, V.A., **A. Subramaniam,** R.M. Negri, R.I. Silva, J.I. Carreto (2006) Annual variations in bio-optical properties at the 'Estación Permanente Estudios Ambientales (EPEA)' coastal station, Argentina. Continental Shelf Research. Vol **26** 1093-1112.

*Tzortziou, M. J.R. Herman, C.L. Gallegos, P.J. Neale, **A. Subramaniam**, L.W. Harding, Z. Ahmad. (2006). Bio-optics of the Chesapeake Bay from Measurements and Radiative transfer closure. Estuarine and Coastal Shelf Science Vol. **68** 348-362.

Westberry, T.K, D.A Siegel, **A. Subramaniam** (2005) An improved bio-optical model for the remote sensing of *Trichodesmium* spp. blooms. Journal of Geophysical Research Vol. **110** C06012 doi:10.1029/2004JC002517.

Capone, D.G., J.A. Burns, J.P. Montoya, **A. Subramaniam**, C. Mahaffey, T. Gunderson, A.F. Michaels. (2005) Nitrogen fixation by *Trichodesmium* spp.: An important source of new nitrogen to the tropical and subtropical North Atlantic Ocean. Global Biogeochemical Cycles, Vol. **19**, GB2024, doi:10.1029/2004GB002331

Capone, D.G. and **A. Subramaniam** (2005) "Seeing Microbes from Space" American Society of Microbiology News

*Del Vecchio, R. and **A. Subramaniam** (2004) Influence of the Amazon River on the surface optical properties of the Western Tropical North Atlantic Ocean. Journal of Geophysical Research. 109, C11001, doi:10.1029/2004JC002503.

J.L. Hand, N.M. Mahowald, Y. Chen, R.L. Siefert, C. Luo, **A. Subramaniam**, and I. Fung (2004) Estimates of atmospheric-processed soluble iron from observations and a global

mineral aerosol model: Biogeochemical implications. Journal of Geophysical Research. DOI 10.1029/2004JD004574.

Knobelspiesse, K. D., C. Pietras, G. S. Fargion, M. Wang, R. Frouin, M. A. Miller, **A. Subramaniam** and W. M. Balch (2004). "Maritime aerosol optical thickness measured by handheld sun photometers." Remote Sensing of Environment. 93 Pp 87-106.

Carpenter, E.J., **A. Subramaniam**, D.G. Capone. (2004). Biomass and primary productivity of the cyanobacterium, *Trichodesmium* spp., in the tropical N Atlantic Ocean. Deep Sea Research I **51:** 173-203.

Subramaniam, A., R. R. Hood, C. W. Brown, E. J. Carpenter and D. G. Capone (2002). "Detecting *Trichodesmium* Blooms in SeaWiFS Imagery." Deep-Sea Research Part II **Vol. 49**/1-3 Pp 107-121.

Hood, R. R., **A. Subramaniam**, L. R. May, E. J. Carpenter and D. G. Capone (2002). "Remote Estimation of Nitrogen Fixation by *Trichodesmium*." Deep-Sea Research Part II **Vol. 49**/1-3 Pp 123-147

Dupouy C., Neveux J., **Subramaniam A.**, Mulholland M.R., Montoya J.P., Campbell L., Capone D.G., and Edward J. Carpenter. (2000). Satellite captures *Trichodesmium* blooms in the South Western Tropical Pacific Ocean. EOS: Transactions: American Geophysical Union **Vol. 81**:2. January 11. 2000.

Carpenter, E.J, J.P. Montoya, J. Burns, M.R. Mulholland, **A. Subramaniam**, and D.G. Capone (1999). Extensive bloom of a N_2 fixing symbiotic association in the tropical Atlantic Ocean. Marine Ecology Progress Series. **Vol.185**:273-283.

Subramaniam, A, E.J. Carpenter, D. Karentz and P.G. Falkowski. (1999) Optical properties of the marine diazotrophic cyanobacteria *Trichodesmium*; I - Absorption and spectral photosynthetic characteristics. Limnology and Oceanography. **Vol.44**:3 Pp. 618-627.

Subramaniam, A, E.J. Carpenter and P.G. Falkowski. (1999) Optical properties of the marine diazotrophic cyanobacteria *Trichodesmium*; II - A reflectance model for remote-sensing. Limnology and Oceanography. **Vol.44:**3 Pp 628-638.

Capone, D.G., **A. Subramaniam**, J.P. Montoya, M. Voss, C. Humborg, F. Pollehne, and E.J. Carpenter. (1998). An extensive bloom of the diazotrophic cyanobacterium, *Trichodesmium erythraem*, in the central Arabian Sea during the spring intermonsoon. Marine Ecology Progress Series. **Vol.172**:281-292.

Subramaniam, A and E.J. Carpenter. (1994) An Initial Protocol to Identify *Trichodesmium* Blooms in CZCS Imagery. International Journal of Remote Sensing, **Vol.15**:8 Pp. 1559-1569.

Vieira, M.E.C., **A. Subramaniam** and H.J. Bokuniewicz. (1992) "Plume Dispersion of Dilute Suspensions: A model of barge overflow adapted for use in a personal computer". Wat. Sci. Tech. **Vol.25**:9, Pp. 173-179.

Maheswaran, S., B.K Rangaraj, R.P Riesz, V.Sriram and **A. Subramaniam**. (1984) "Plastic optics for laboratory use". The Journal of Optics 1984, **Vol.13**:2 Pp58-59.

Book Chapter:

*Tzortziou M., C. L. Gallegos, P. J. Neale, **A. Subramaniam**, J. R. Herman and L. W. Harding, "Bio-Optical Characteristics and Remote Sensing in the Mid Chesapeake Bay Through Integration of Observations and Radiative Transfer Closure", Chapter 7 (p. 139-168) in Remote Sensing and Geospatial Technologies for Coastal Ecosystem Assessment and Management, Lecture Notes in Geoinformation and Cartography (ed. X. Yang), DOI 10.1007/978-3-540-

88183-4 7, Springer-Verlag Berlin Heidelberg, 2009

Conference Proceedings:

Lutz, V. A, **A. Subramaniam**, R.M. Negri, R.I. Silva, J.I. Carreto (2002). Temporal Variations In The Bio-Optical Characteristics At A Coastal Station In The Southwestern Atlantic (Argentina). Proceedings of the International Society of Optical Engineering (SPIE), Ocean Optics XVI, Santa Fe, USA.

Subramaniam, A., S. Kratzer, E. J. Carpenter and E. Söderbäck (2000). Remote sensing and optical in-water measurements of a cyanobacteria bloom in the Baltic Sea. Sixth International Conference on Remote Sensing for Marine and Coastal Environments, Charleston, SC, Veridian ERIM International.

Clemente-Colon, P., W.G. Pichel, and **A. Subramaniam**. (2000) Synthetic Aperture Radar Indicators of Biological and Fisheries Activity in the Bering Sea. COAA 2000 Conference, Taipei, Taiwan.

Brock, J.C., K. Waters, **A. Subramaniam**, E. Armstrong. (1997) "The Coastal Remote Sensing Program at the NOAA Coastal Services Center – A Bridge Between Science and Coastal Resource Management". Fourth International Conference on Remote Sensing for Marine and Coastal Environments, Orlando, FL Veridian ERIM International.

Subramaniam, A., K. Waters, E. Armstrong, J. Brock, R. Ranheim. (1996) "Spatial variability in optical properties of the waters around the Ambrose light tower." Proceedings of the International Society of Optical Engineering (SPIE), Ocean Optics XIII, Halifax, Canada.

Waters, K., J. Brock, **A. Subramaniam**, R. Stumpf, E. Armstrong. (1996) "Satellite assessment of hurricane-induced ocean turbidity for the southern U.S. coastline". Proceedings of the International Society of Optical Engineering (SPIE), Ocean Optics XIII, Halifax, Canada.

Reports:

Hood, R.R., S.W.A. Naqvi, J.D. Wiggert, **A. Subramaniam** (2007). Biogeochemical and Ecological Research in the Indian Ocean. EOS **88,** 12, 144-145.

Kuwahara, V. S., P. G. Strutton, T. D. Dickey, M. R. Abbott, R. M. Letelier, M. R. Lewis, S. McLean, F. P. Chavez, A. Barnard, J. R. Morrison, **A. Subramaniam**, D. Manov, X. Zheng and J. L. Mueller (2003). Radiometric and Bio-optical Measurements from Moored and Drifting Buoys: Measurement and Data Analysis Protocols. Ocean Optics Protocols for Satellite Ocean Color Sensor Validation, Revision 4, Volume VI: Special Topics in Ocean Optics Protocols and Appendices. J. L. Mueller, G. S. Fargion and C. R. McClain. Greenbelt, MD, NASA/GSFC. **NASA/TM-2003-211621/Rev4-Vol.VI:** 35-79.

Subramaniam, A., M. E. Culver and M. E. Geesey (2000). NOAA Cruise APR00FWS: West Florida Shelf Cruise. Charleston, SC, NOAA Coastal Services Center.

Subramaniam, A., N. Blough, L. Harding, M. E. Geesey, C. W. Brown and M. E. Culver (2000). NOAA Cruise OCT99MAB: Mid Atlantic Bight Cruise. Charleston, SC, NOAA Coastal Services Center.

Subramaniam, A. *et al*. 1999 NOAA NOS Cruise JUL98NAN: Nantucket Shoals Cruise. CSC Technical Report NOAA CSC 99043-PUB

Subramaniam, A., J.C. Brock, P.A. Tester, E. Haugen, R.P. Stumpf. 1998. NOAA NMFS Cruise MAY97OB: Onslow Bay and Pamlico Sound Cruise. CSC Technical Report CSC/2-98/001.

Subramaniam, A., E.M. Armstrong, K.J. Waters, J.C. Brock, P.A. Tester, E.Haugen. 1997.

NOAA CSC/CRS Cruise MAR97OCC: OCTS Calibration Cruise. CSC Technical Report CSC/5-97/001.

Subramaniam, A., E.M. Armstrong, K.J. Waters, J.C. Brock, A.W. Meredith, R.O. Ranheim. 1997. NOAA CSC/CRS Cruise MAY96NY: New Bight Apex Cruise. CSC Technical Report CSC/6-97/001.

Subramaniam, A., K.J. Waters, A.W. Meredith, E.M. Armstrong, R.M Bohne, W.G. Keull, J.R. Nelson, G.R. DiTullio, J.C. Brock. 1997. NOAA CSC/CRS Cruise APR96FER: Gray's Reef Cruise. CSC Technical Report CSC/7-97/001.

Subramaniam, A. (1991) "Blooms of the pelagic cyanobacterium *Trichodesmium*: Detection with CZCS imagery". A Report to the NASA Planetary Biologist Internship Program, Marine Biological Laboratory, Woods Hole, MA.

Subramaniam, A. and H.J. Bokuniewicz. (1990) "Lateral Water-Density Transects in Western Long Island Sound". Special Report #91, Reference #90-2 Marine Sciences Research Center, SUNY at Stony Brook, NY 11790-5000.

Invited Talks:

2011 Remote sensing for marine conservation and MPA development. Symposium:Innov 200 at the Second International Marine Conservation Congress, Victoria, Canada, May 2011.

2011 Extent & Fate of the Oil Released at Deepwater Horizon: Puzzles and Mysteries. Environmental Law Institute NRDAWorkshops, Harvey LA and Biloxi, MS. April 2011.

2011 Bidirectional Fluxes of Material Between Ocean, Atmosphere, and Adjacent Coastal Areas. ASLO Aquatic Science Meeting, San Juan, PR, February 2011. Invited Tutorial Talk in the "Ocean-Atmosphere Interactions in Coastal Regions: Observations and Modeling Approaches" session.

2010 Oil/Dispersant Fate & Extent: Puzzles and Mysteries. Deepwater Horizon Oil Spill Principal Investigator Conference, St. Petersburg, FL, October 2010.

2010 Phytoplankton, water color, ocean color, and climate. Illuminating The Science: Art+Climate Change Panel at the Martin E. Segal Theatre Center, New York, April 2010.

2010 Spatial variability in optical and biogeochemical properties of the Equatorial Atlantic Ocean – Tropical Atlantic Climate Experiment Workshop, Miami, FL, March 2010.

2009 Nitrogen fixation in the Eastern Equatorial Atlantic - Workshop and Conference on Biogeochemical Impacts of Climate and Land-Use Changes on Marine Ecosystems, Trieste, Italy, November 2009.

2009 "Great Rivers and changing oceans" – NSF GEOSCIENCE Brownbag.

2009 "The New Nitrogen Symphonie: Allegro – Great River Plumes". EGU, Vienna, Austria, April 2009. Invited talk in the "New aspects of the marine nitrogen cycle's processes and budget" session.

2008 The Nitrogen Cycle Fugue: Variations On The New Production Theme In Great River Plumes. Ocean Sciences, Orlando, FL, February 2008. Invited Tutorial Talk in the "Influence of Tropical Rivers on Oceanic Biogeochemical Cycles" session.

2007 Sea stories – Marine ecosystems in a changing ocean. Explorers Club, New York.

2007 Great Rivers and Changing Oceans: What Nile Goddess Anuket and Her Sisters may tell us. FOLD Dinner 2007, LDEO.

2007 Tropical Rivers Enhance Carbon and Nitrogen Fixation. Ocean Carbon and Biogeochemistry 2007 Meeting, Woods Hole.

2007 Influence of tropical rivers on carbon sequestration and nitrogen fixation. NASA Ocean

Color Research Team Meeting, Seattle.
2006 Marine ecosytem productivity and diversity. Columbia Club of Atlanta.
2006 Life in the fast lane of land-ocean exchanges I: Global Processes. Earth Institute Cross-cutting seminar, Columbia University.
2006 Sustained Indian Ocean Biogeochemical and Ecological Research at the INDOFLUX workshop, Chennai, India
2005 Remote sensing and cyanobacterial blooms at "Marine Cyanobacteria: Evolution, Function And Genomes". 24-27 August 2005 at Haga Forum, Stockholm, Sweden
2005 Influence of the Amazon River on Nitrogen Fixation in the Western Tropical North Atlantic Ocean. - Conference on "Significant Processes, Observations, and Transformation in Oceanic Nitrogen" Baltic Sea Research Institute Warnemünde, Germany.
2005 Comparison of in-situ measurements with SeaWiFS and MODIS estimates of chlorophyll concentrations – MWRA Annual Science Workshop, Battelle, Duxbury, MA.
2004 Trends in satellite derived chlorophyll concentrations – MWRA Annual Science Workshop, Battelle, Duxbury, MA.
2003 The Use of Satellite Data for Monitoring Massachusetts Bay – Outfall Monitoring Science Advisory Panel – Woods Hole Oceanographic Institution
1999 *Trichodesmium* from space. NASA SMP workshop on Distribution of functional groups in biogeochemical models - Rutgers University.
1998 An Evaluation of the SeaWiFS algorithm performance in the South Atlantic Bight. NOAA Coastal Ocean Program Workshop on Ocean Color Remote Sensing, Washington DC.
1998 Remote sensing of cyanobacterial blooms. Conference on Algal Bloom Detection Monitoring and Prediction. Dept. of Geography, Stockholm University, Sweden
1993 A *Trichodesmium* flag for SeaWiFS level II data" Second SeaWiFS Bio-optics Workshop, NASA Goddard Space Flight Center, Greenbelt MD.

Invited Departmental Seminars at:
2011 University of New Hampshire
2011 Princeton University
2011 National Center for Antarctic and Ocean Research, India
2011 National Institute of Oceanography, India
2011 Columbia University Noon Balloon Series
2010 Stockholm University, Stockholm, Sweden
2010 Drexel University, Philadelphia, PA.
2010 Universidad de Chile, Santiago, Chile.
2010 Universidad de Concepcion, Chile.
2008 Lamont Doherty Earth Observatory Earth Science Colloquium
2007 Department of Geology, Brooklyn College, New York.
2007 Centre Institut de Recherche pour le Developpement de Bretagne, Brest.
2006 LDEO, Biology and Paleo Environment Division Seminar
2006 ESSIC, University of Maryland
2006 LDEO Ocean and Climate Physics Division Seminar
2005 Stevens Institute of Technology
2005 Columbia University Earth Microbiology Interest Group

2005 NASA Goddard Institute for Space Studies, New York.
2004 Dept. of Oceanography, University of Concepcion, Chile.
2004 MSRC, Stony Brook University
2004 IMCS, Rutgers University
2004 Dept. of Marine Sciences, University of Connecticut
2004 Wesleyan University
2003 ESSIC, University of Maryland
2002 Horn Point Environmental Laboratory
2002 Lamont Doherty Earth Observatory
2002 Instituto Nacional De Pesquisas Espacias, São José dos Campos, Brazil
2001 ESSIC, University of Maryland
2001 Department of Biological Sciences, University of Southern California
2000 Instituto Nacional de Investigacion y Desarrollo Pesquero, Mar Del Plata, Argentina
1999 Center for Coastal Physical Oceanography, Old Dominion University
1999 Department of Meteorology, University of Maryland
1998 Horn Point Environmental Laboratory
1998 Chesapeake Biological Laboratory
1997 College of Charleston

Contributed Presentations (papers by students/post doctoral fellows mentored indicated by *****)**:**

Subramaniam, A. Bidirectional Fluxes of Material Between Ocean, Atmosphere, and Adjacent Coastal Areas. 2011 ASLO Aquatic Science Meeting, San Juan, PR.

*Phan, S and A. Subramaniam. Remote sensing of sediment concentrations in the Hudson River using MODIS/Aqua land bands. 2011 ASLO Aquatic Science Meeting, San Juan, PR.

Montoya, JP, A. Subramaniam, V. Asper, A. Diercks, U. Passow, M Crespo-Medina, S. Joye, A. Bracco, T.A. Villareal. Subsurface turbid layers in the Gulf of Mexico: Ghosts of the Deepwater Horizon Oil Spill? 2011 ASLO Aquatic Science Meeting, San Juan, PR.

Joye, S. B., M. Crespo-Medina, K.S. Hunter, A. Vossmeyer, L. Beer, M.W. Bowles, V. Asper, A. Diercks, AP. Teske, C. Benitez-Nelson, J. Brandes, JP Montoya, U. Passow, WS. Moore, A. Subramaniam, T. Wade, C. Arnosti, K. Ziervogel, E. Burgess, R. Highsmith. The Microbial Slime Highway: Oil Transport To The Benthos And Consequences On Microbial Dynamics In Deep Gulf Of Mexico Environments. 2011 ASLO Aquatic Science Meeting, San Juan, PR.

Crespo-Medina, M., KS. Hunter, J. Slaughter, A. Vossmeyer, JP. Montoya, A. Diercks, V. Asper, A. Subramaniam, TA. Villareal, SB. Joye. Patterns Of Water Column Aerobic Methane Oxidation Rates In Response To The Deepwater Horizon Hydrocarbon. 2011 ASLO Aquatic Science Meeting, San Juan, PR.

*Andrew, A., R. Del Vecchio, N. Blough, A. Subramaniam. An Optical Bio-geographical Description of the Equatorial Atlantic Ocean. 2010 Ocean Sciences Meeting, Portland.

Subramaniam, A., and C. Mahaffey. Bio-geography of nitrogen fixation rates in the Equatorial Atlantic Ocean. 2010 Ocean Sciences Meeting, Portland, OR.

Subramaniam, A., J.P. Montoya, R.A. Foster, and D.G. Capone. Nitrogen Fixation in the Eastern Equatorial Atlantic: Who and How Much? 2009 EGU Meeting, Vienna, Austria.

Subramaniam, A. and E. Key. Optical Properties of the Eastern Equatorial Atlantic. Tropical Atlantic Meeting, Toulouse, France. 2009.

Subramaniam, A., Bronk, D. The Nitrogen Cycle Fugue: Variations On The New Production Theme In Great River Plumes. 2008 Ocean Sciences Meeting, Orlando, FL.

*Colebank, Y., Reison, D., Subramaniam, A. Using Argo Profilers And Ocean Color Satellite Data To Trace The Congo River. 2008 Ocean Sciences Meeting, Orlando, FL.

Nelson, J. R., Subramaniam, A., Tzeng, M., Robertson, C. Y., Del Vecchio, R. Satellite Ocean Color Record Of Seasonal And Inter-Annual Variability In Cdom Dynamics In The South Atlantic Bight. 2008 Ocean Sciences Meeting, Orlando, FL.

*Foster, R. A., Subramaniam, A., Zehr, J. P., Influence Of The Congo And Niger River Plumes On Distributions Of Free-Living And Symbiotic Cyanobacteria. 2008 Ocean Sciences Meeting, Orlando, FL.

*Reed, M S., A. Subramaniam. The Use of Ocean Color Remote Sensing for Water Quality Monitoring in Massachusetts Bay. 2006 Ocean Sciences Meeting, Honolulu, HI.

Subramaniam, A., Karl, D M., Shipe, R., Villareal, T. Do Diatom-Diazotroph Associations Contribute Significantly to C Sequestration Globally? 2006 Ocean Sciences Meeting, Honolulu, HI.

Capone, D G., Subramaniam, A., Carpenter, E J. Nitrogen Fixation by Diazotroph- Diatom Associations: A Nitrogen Input Amplifier in the Open Ocean. 2006 Ocean Sciences Meeting, Honolulu, HI.

*Tzortziou, M., Subramaniam, A., Herman, J R., Gallegos, C L., Neale, P J., Harding, L W. Remote Sensing Reflectance and Inherent Optical Properties in the Mid-mesohaline Chesapeake Bay. 2006 Ocean Sciences Meeting, Honolulu, HI.

*Del Vecchio, R, Blough, N V, Brown, C W, Subramaniam, A. Can the Photochemical Oxidation of Carbon to CO2 on Continental Shelves Be Estimated From Satellite Ocean Color Measurements? 2006 Ocean Sciences Meeting, Honolulu, HI.

Shipe, R F., Curtaz, J., Subramaniam, A., Carpenter, E., Capone, D G. Oceanographic Conditions Related to Diatom Only and Diatom-Diazotroph Assemblages in the Western Tropical Atlantic Ocean, Spring 2003. 2006 Ocean Sciences Meeting, Honolulu, HI.

Yager, P., Cooley, S., Subramaniam, A., Shipe, R., Mahaffey, C., Bjorkman, K., Sanudo-Wilhelmy, S., Tovar-Sanchez, A., Carpenter, E., Capone, D. Diatom-Diazotroph Associations in the Amazon River Plume are Linked with Carbon Sequestration in the Western Tropical North Atlantic. 2006 Ocean Sciences Meeting, Honolulu, HI.

Subramaniam, A., E.J. Carpenter, R. Shipe, P. Yager, D. Capone. The Diatom Express. ASLO Summer Meeting, 2005.

*Del Vecchio, R. A. Subramaniam: Influence of the Amazon River on the surface optical properties of the Western Tropical North Atlantic Ocean. ASLO Summer Meeting, 2005.

Westberry, T. K.; Siegel, D. A.; Subramaniam, A.: Patterns Of Trichodesmium Blooms In The Worlds Oceans. ASLO Aquatic Sciences Meeting 2005

Carpenter, E. J.; Subramaniam, A.; Burns, J.; Cooley, S.; Finzi, J.; Gunderson, T.; Shipe, R.; Yager, P.; Capone, D.; Mahaffey, C.: Carbon And Nitrogen Fixation In The Western Tropical North Atlantic (Wtna) Ocean. ASLO Aquatic Sciences Meeting 2005.

*Finzi, J. A.; Subramaniam, A.; Kustka, A. B.; Capone, D.G.: Photophysiological Parameters Of Trichodesmium Isolate Ims-101 Under P And Fe Limitation. ASLO Aquatic Sciences Meeting 2005.

Capone, D. G.; Burns, J. A.; Carpenter, E. J.; Gunderson, T.; Holl, C. M.; Michaels, A. F.; Montoya, J. P.; Sohm, J. A.; Subramaniam, A.: Partitioning Marine Planktonic Nitrogen Fixation. ASLO Aquatic Sciences Meeting 2005.

Subramaniam, A., R. Del Vecchio, E.J. Carpenter, D.G. Capone. Effects of the Amazon River Plume on phytoplankton species composition in the Western Tropical Atlantic Ocean (WEQAT). ASLO/TOS 2004

*Del Vecchio, R., A. Subramaniam. Spatial and temporal variability of the optical properties of chromophoric dissolved organic matter (CDOM) in the Western Tropical Atlantic Ocean. ASLO/TOS 2004

Capone, D.G., A. Subramaniam, A.F. Michaels, J.A. Burns, E.J. Carpenter. Globally-scaled estimates of *Trichodesmium* nitrogen fixation. ASLO/TOS 2004

Mahaffey, C., A. Subramaniam, J. Burns, D.G. Capone. Divergence between biological and geochemical signals of N_2 fixation in the Tropical Western Atlantic. ASLO/TOS 2004

Subramaniam, A., Lutz, V, A., Negri, R.M., Silva, R I. Scales Of Temporal And Spatial Variability In Chlorophyll Concentration On The Argentine Continental Shelf. 2003 ASLO Aquatic Sciences Meeting, Salt Lake City.

Subramaniam, A., McLaughlin, B E, Carpenter, E J, Capone, D G. Remote Sensing the PIRANA Paradigm. 2002 Ocean Sciences Meeting

*Finzi, J.A., Burns, J A, Subramaniam, A, Hood, R R, Capone, D G. Light Dependent Carbon and Nitrogen Fixation Characteristics of *Trichodesmium.* 2002 Ocean Sciences Meeting

Subramaniam, A. 2001. Dusty Skies and Varied Waters: Validation of SeaWiFS Algorithms in the Tropical Atlantic Ocean.. Fall AGU 2001, San Francisco. EOS Trans.AGU 82 (47), Fall Meet. Suppl., Abstract OS51E-09.

*McLaughlin, B.E. and A. Subramaniam 2001. An Evaluation of SeaWiFS Derived Chlorophyll Concentration in Massachusetts Bay. Fall AGU 2001, San Francisco. EOS Trans.AGU 82 (47), Fall Meet. Suppl., Abstract OS51E-07.

Subramaniam, A., S. Kratzer, E. J. Carpenter and E. Söderbäck (2000). Remote sensing and optical in-water measurements of a cyanobacteria bloom in the Baltic Sea. Sixth International Conference on Remote Sensing for Marine and Coastal Environments, Charleston, SC, Veridian ERIM International.

Subramaniam, A. J. Nolan, J. Wieland, M. Kahru, B.G. Mitchell. 2000. "An Optical Bio-geographical Description of the Indian Ocean During the 1999 Spring Intermonsoonal". Ocean Sciences Meeting, San Antonio, TX. EOS Vol.80, No.49, OS163.

Subramaniam, A., J. Campbell,, C. Hunt, M. Mickelson. 2000. "The Use of Ocean Color Data for Coastal Monitoring". Ocean Sciences Meeting, San Antonio, TX. EOS Vol.80, No.49, OS274.

Subramaniam, A., C. W. Brown, P.A. Tester, R. Stumpf, M.E. Culver, J.C. Brock. 1998. An Evaluation of the OC2 SeaWiFS Algorithm Performance in the South Atlantic Bight. Ocean Optics XIV, Hawaii.

Subramaniam, A., E.J. Carpenter and P.G. Falkowski. 1998. Spectral absorption characteristics of *Trichodesmium*: A biophysical valve to regulate photosynthesis. 1998 Ocean Sciences Meeting, San Diego, CA. EOS Vol.79:1,OS22J-3.

Subramaniam, A., C.S. Yentsch, D.A. Phinney, J.C. Brock. 1997. Spatial variability in optical properties of the coastal waters of the southern Gulf of Maine. 1997 Fall AGU Meeting, San Francisco, CA.

Subramaniam, A, E.J. Carpenter and P.G. Falkowski. 1996 "Spectral Absorption, Fluorescence and Backscattering properties of the marine diazotroph *Trichodesmium* spp." 1996 Ocean Sciences Meeting, San Diego, CA. EOS Vol.76:3,OS112.

Subramaniam, A, E.J. Carpenter and P.G. Falkowski. 1994 "An optical model for the planktonic

diazotroph *Trichodesmium* spp." 1994 Ocean Sciences Meeting, San Diego, CA. EOS Vol.75:3 page 103.

Subramaniam, A, E.J. Carpenter and P.G. Falkowski. 1992 "An initial algorithm to identify blooms of *Trichodesmium* in satellite imagery" AGU 1992 Fall Meeting, San Francisco, CA. EOS Vol. 73:43 page 265.

Subramaniam, A, P.G. Falkowski, D.G. Capone and E.. Carpenter. (1992) "Does *Trichodesmium* facilitate "echo blooms" of phytoplankton?" ASLO92 Meeting, Santa Fe, NM.

Contracts and Grants:

Current:

1. Climate Center. "Developing Lipid Biomarkers to Study the Fate of Diazotrophs in the Ocean". PI. $8000, 6/1/11-11/30/12.
2. NASA. "Multisensor Mapping Of Spatial And Temporal Variability Of Large River Plumes." PI. $137,770. 8/23/10-8/22/11.
3. NSF: MRI:RAPID: Gulf Oil Spill Instrument Acquisition For Fluorometric Detection Of Underwater Oil And Soluble VOCs. CoPI $132,639. 8/1/2010-7/31/11.
4. NSF: RAPID: Rapid Assessment Of Extent And Photophysiological Effects Of The Deepwater Horizon Oil Spill. CoPI $199,972. 8/1/10-7/31/11.
5. Ocean-Atmosphere-Terrestrial Systems (OATS) Working Group Flagship Project: Microbes, Mariculture, Forests, and Fog in Southern Chile. Co PI $199,473.

Past:

1. NASA Oceans and Ice. "Varied Waters And Dusty Skies III: The Use Of Satellite Ocean Color Data Products To Study The Eastern Tropical Atlantic Ocean". PI 1 Oct 2005-30 Sept. 2008. $621,785.
2. NASA Carbon Cycle. "Mapping Dissolved Organic Carbon in Eastern U.S. Coastal Waters Using Ocean Color Satellite Data. PI 1 Jan. 2005 – 31 Dec. 2007. $671,200.
3. NSF International Programs: U.S.-Vietnam Planning Visit: Collaborative Research on Nutrient Cycling and Productivity in the South China Sea. CoPI 1 Sept. – 31 Dec. 2007. $12,018.
4. Earth Institute Climate Center Award. Influence of Ocean Biota on Tropical Climate Variability. PI 1 Dec. 2006-31 May 2007. $6000.
5. NASA Carbon Cycle Type I Applications. "The Use of Satellite Ocean Color Data for Coastal Water Quality Monitoring". PI 1 Sept. 2001 – 30 Aug. 2004. $504,649. University of Maryland.
6. NSF, SGER. Oceanographic Field Survey of the Atlantic Ocean. PI 1 Dec. 2002 – 30 Nov. 2003. $2,960.
7. AAAS WISC Travel Award. Phytoplankton Bloom Dynamics and *in situ* optical properties of the Argentine Continental Shelf. PI 15 Oct. 2002 – 14 Oct. 2003. $4,000.
8. NASA Mooring Based Optical Measurements in the Tropical Atlantic Ocean. PI. 1 Sept. 2001 to 30 August 2002. $60,522. University of Maryland.
9. NASA, SIMBIOS (MTPE). " Varied Waters and Hazy Skies: Validation of ocean color satellite data products in under-sampled marine areas:II". PI. 1 Dec 2000- 31 Nov 2003. 3 y, $578,612. University of Maryland.
10. NSF, BIOCOMPLEXITY I. "Collaborative Research: Factors affecting, and impact of, diazotrophic microorganisms in the western Equatorial Atlantic Ocean." Multi-institutional, SFSU lead. Co-PI, USC component (W/ Capone & Fuhrman). 1 Jan 2000 -

31Dec 2004, $1,961,943, direct support 3 mo/y. University of Southern California.

11. NSF, BIOCOMPLEXITY I. "Collaborative Research: Oceanic N_2 fixation and Global Climate." Multi-institutional. Co-PI (W/ Michaels, PI, Haug and Capone). 1 Jan 2000-31 Dec 2004, $2,314,514, direct support 2 mo/y. University of Southern California.
12. NASA, SIMBIOS (MTPE). "Validation of ocean color satellite data products in under-sampled marine areas". 1 Sep 1997- 31 Aug 2000. $477,000. CoPI direct support 50% (6 mo/y). University of Southern California.
13. NASA, SIMBIOS (MTPE). "Evaluation and Validation of Bio-optical Algorithms in U.S. coastal waters". 1 Oct 1999- 30 July 2000. $60,000. CoPI direct support 42% (5 mo/y). University of Maryland
14. NASA, JGOFS Synthesis and Modeling Program. "Modeling N_2 and CO_2 fixation by the oceanic diazotroph, *Trichodesmium*". 1 Oct 97 to 31 Sep 00. CoPI. $150,000, 3 years, no salary). University of Southern California.

Awards:

National Science Foundation Director's Award for Collaborative Integration (2010).

Fulbright Senior Specialist Award – have been placed on the Fulbright Senior Specialist Roster and obtained a Fulbright grant to teach in Chile (2010).

Best Talk, Plenary Session - Sixth International Conference on Remote Sensing for Marine and Coastal Environments, Charleston, SC. (2000)

DIALOG II Attendee – was selected to attend the Dissertations Initiative for the Advancement of Limnology and Oceanography Symposium in Bermuda (1997).

TPMC President's Award for developing the field program at the Coastal Remote Sensing Program, NOAA Coastal Services Center (1996).

NASA Graduate Fellow in Global Change Research (1992-1995).

New York SeaGrant Fellow (1991).

NASA Planetary Biologist Intern (1990), NASA Goddard Space Flight Center, MD.

Graduate Student Organization Travel Award to attend NATO Advanced Research Workshop on diazotrophic cyanobacteria at Bamberg, Germany, 1991.

Teaching and Advising:

Taught at the Nordic Network for Aquatic Remote Sensing PhD training course in sea-truthing, 16-23 May 2010 at Askö Marine Laboratory, Sweden.

Taught an International course "Use of Remote Sensing and Geographical Information Systems for Coastal Water Quality Monitoring" at the University of Concepcion, Chile, 6-17 Dec. 2004, 16-26 Jan. 2007, and 11-15 Jan. 2010. These courses were sponsored by IOC/UNESCO and was attended by students from all over Latin America.

Taught ocean color remote sensing at the International Center for Theoretical Physics, Trieste, Italy in November 2009 as a part of the Workshop and Conference on Biogeochemical Impacts of Climate and Land-Use Changes on Marine Ecosystems.

Taught two sessions in EESC W4050 Global Assessment and Monitoring Using Remote Sensing course, Columbia University, Fall 2004, 2006.

Taught GEOL499 – Directed Study, University of Maryland, Spring 2003.

Taught GEOL388 – "Oceanographic field survey of the Atlantic" for undergraduates winter intersession, University of Maryland, 2003.

Helped teach a section of "Problems in Earth System Science" (CMPS628), University of

Maryland, 2001.
Training two Columbia University graduate students (E3B Department, Martin Mendez and Eli Dueker) on use of remote sensing for their research projects (2007-2008).
Supervised summer REU students (2 students in 2005, 1 student each in 2010 and 2011), two Earth Institute Interns (2007, 2010). Took the Earth Institute Intern to Vietnam on a planning visit for a project to study the Mekong Plume in 2007 and took the REU student on a 30 day field cruise in the Gulf of Mexico in 2011.
Supervised High School students (2005, 2007).
Supervised Barnard Senior Thesis student (2006).
Hosted the 2011 Marie Tharp Fellow, Jill Sohm.

Ph.D. Dissertation committee of	Maria Tzortziou, University of Maryland,
	Juliette Finzi, University of Southern California
	Andrea Andrews, University of Maryland
	Yuley Cardona, Georgia Institute of Technology
External PhD Examiner of	Lachlan McKinna, James Cook University, Australia
Post Doctoral Advisor of	Rossana Del Vechio, University of Maryland
	Rachel Foster, LDEO, Columbia University
	Erica Key, LDEO, Columbia University
	Nigel D'Souza, LDEO, Columbia University

Professional Activities:

Gordon and Betty Moore Foundation New Initiatives Review Committee Member
NASA Climate and Biological Response Review Panel member 2011.
Member of the Science Working Group for Geo-CAPE, a new NASA sensor.
Science Steering Committee member of the North American Carbon Program.
NASA Earth Observation Venture Class Panel member 2010.
Was awarded a Fulbright grant to teach "Use of Remote Sensing and Geographical Information Systems for Coastal Water Quality Monitoring" in January 2010 at the University of Concepcion, Chile and to conduct field work in the Chilean Patagonia.
One of the lead authors of a new five-year program solicitation on Water Sustainability and Climate at the National Science Foundation.
Associate Program Director, Biological Oceanography Program, National Science Foundation (2008-2010).
NOPP Instrumentation Competition Panel member 2009.
Lamont Committees: Lamont Post Doc Search Committee (2011-); Lamont Assistant Professor in Biological Oceanography Search Committee (2010-11); Columbia DEES Biogeoscience Faculty search committee (201-2011); Observatory Technical & Innovation Center (2006-08), Promotions and Career (2006-2008), Web advisory (2004-07), Research Proposal Workgroup, BPE Seminar (2004-2006).
NASA 2007 EOS recompete Panel member
Science Steering committee of Workshop on Sustained Indian Ocean Biogeochemical and Ecological Research (2006-2007).
INDOFLUX Workshop participant
Proposals Reviewer for NASA, NSF, NERC, NOAA NESDIS, NOAA COP
Journal Reviewer for Applied Optics, Deep Sea Research, Journal of Geophysical Research, Nature, Science, Remote Sensing of Environment, Global Biogeochemical

Cycles, Limnology and Oceanography, Geophysical Research Letters, Journal of Applied Remote Sensing, Continental Shelf Research, Proceedings of the National Academy of Science.
NASA Carbon Cycle 2004 science team member
NASA Oceans and Ice 2004 science team member.
NASA SIMBIOS 2000 Science team member
NOAA RADARSAT 2000 Science team member
IRS-P4 Science team member
Selection committee for DIALOG III, 1999.
NASA SIMBIOS 1997 Science team member
Participated in the NCAR Junior Faculty Forum on Future Scientific Directions, 2004.
Organized a special session on Biogeochemistry of the Tropical Atlantic Ocean at the Summer ASLO meeting, Spain, 2005.
Organized a special session on Diatom Diazotroph Assemblages at the Ocean Sciences Meeting, Honolulu, 2006.
Organized a special session on Influence of Tropical Rivers on Oceanic Biogeochemical Cycles at the Ocean Sciences Meeting, Orlando, 2008.

Selected Shipboard Experience:
Chief Scientist on *R.V. Gyre* cruise from St. Lucia to Miami, 1994. Was responsible for the scientists, supervised cruise-track planning etc.
Chief Scientist on *R.V. Cape Henlopen*, from Delaware into the Sargasso sea to collect *Trichodesmium,* 1994. Was responsible for cruise planning and supervised the scientists.
Chief Scientist on *R.V. Blue Fin* from Skidaway, GA in the south Atlantic Bight, February and April 1996. Was responsible for cruise planning, bio-optical data acquisition.
Chief Scientist on *R.V. Palmetto* from Charleston, SC in the South Atlantic Bight, March, November 1997. Was responsible for cruise planning, data acquisition.
Chief Scientist on *R.V. Gulf Challenger* from Portsmouth, NH in Nantucket Shoals and Massachusetts Bay, July 1998. Was responsible for cruise planning and supervised the scientific staff and students.
Chief Scientist on the *R.V Knorr* from Barbados to make a full suite of interdisciplinary physical, biological, chemical and optical measurements in the Tropical Atlantic Ocean. Was responsible for the scientists, students, and cruise planning. June-August 2001.
Chief Scientist on the *R.V. Oceanus* from Woods Hole to Fortaleza to teach a field oceanography course for undergraduates from University of Maryland. January 2002.
Chief Scientist on the *R.V Seward Johnson* from Barbados to make a full suite of interdisciplinary physical, biological, chemical and optical measurements in the Tropical Atlantic Ocean. Was responsible for the scientists, students, and cruise planning. April-May 2003.
R.V. Aqua Monitor from Boston to make bio-optical measurements in Massachusetts Bay. February, July, October, November, 2002, June, 2003, February, April, June, 2004, April, August 2005.
R.V. AkademiK Ioffe from Ushuaia, Argentina to Antarctic Peninsula to make bio-optical measurements. December-January 2001-02.
Navio Hidroceanografico Amorim Do Valle from Fortaleza, Brazil to outfit optical sensors on a mooring in the Tropical Atlantic. March-April 2002.

R.V. Kilo Moana from Honolulu to make bio-optical measurements in the subtropical Pacific Ocean. September-October 2002.
R.V. Roger Revelle from Honolulu to make bio-optical measurements in the subtropical Pacific Ocean. August 2003.
R.V Savannah from Savannah in the South Atlantic Bight. May 2005.
R.V. Sonne from Nha Trang, Vietnam, to study the influence of the Mekong River Plume in the South China Sea. April 2006.
R.V. Atalante from Cotonou, Benin, to study the bio-optical properties of the Eastern Equatorial Atlantic Ocean. May-July, 2006.
R.V. Hugh Sharp from Lewis, Delaware, in the Mid Atlantic Bight. August, November 2006.
R.V. Antea from Cotonou, Benin, to study the bio-optical properties of the Eastern Equatorial Atlantic Ocean. June, 2007.
R.V Oceanus from Gulfport, MS, to study the fate and extent of the oil released into the Gulf of Mexico by the BP Deepwater Horizon accident, August/September 2010.
R.V. Endeavor from Gulfport, MS to study the role of the Mississippi River plume on nitrogen cycling in the Gulf of Mexico, July 2011.

Membership in Professional Societies:

Association for the Sciences of Limnology and Oceanography
American Geophysical Union
American Association for Advancement of Sciences
Society for Conservation Biology

Consultancies:

Consultant to NOAA/NESDIS and NOAA/CSC on Remote Sensing, Bio-optics and Algorithm evaluation for U.S. coastal waters. (1997-2000)
Consultant to Battelle on Remote Sensing of water quality. (1997-2005)