

PAULA S. BONTEMPI

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EDUCATION

Ph.D. Oceanography, University of Rhode Island, Narragansett, RI, 2001
M.S. Oceanography, Texas A&M University, College Station, TX, 1995
B.S. Biology, Boston College, Chestnut Hill, MA, 1992

EXPERIENCE

April 2019-Present, *Deputy Director (Acting)*, Earth Science Division, Science Mission Directorate, NASA Headquarters, Washington, D.C., 20546.

Supports the director in providing executive leadership, strategic direction, and overall management for the entire agency's Earth Science portfolio, from technology development, applied science, research, mission implementation and operation.

January 2003-March 2019, *Physical Scientist/Program Scientist*, Ocean Biology and Biogeochemistry, Earth Science Division, Science Mission Directorate, NASA Headquarters, Washington, D.C., 20546.

- Leads and manages NASA Earth Science Division's (ESD) Ocean Biology and Biogeochemistry (OBB) research portfolio, including carbon cycle science, phytoplankton physiology and productivity, air-sea gas exchange, ecosystem-climate modeling, ecological and biodiversity studies, and technology and algorithm development and refinement.
- Coordinates integration of all terrestrial and aquatic carbon cycle and ecosystems research at NASA, including the integration of relevant applied science research.
- Oversees all carbon cycle science research (land, ocean, and atmosphere) at NASA.
- Manages solicitation, review, and execution of portfolio of basic research in NASA Ocean Biology and Biogeochemistry, Interdisciplinary Science, Carbon Cycle Science, and mission science teams including the PACE and Suomi NPP missions, and MODIS instrument on NASA's Terra and Aqua platforms.
- Develops and manages calls for proposals, NASA Research Announcements and Announcements of Opportunities.
- Leads coordination and integration of relevant research and program collaborations with all U.S. and international partners.
- Plans, presents, and implements position-relevant portion of NASA's Earth Science Program for NASA leadership, the Executive Office of the President, Congress, and external stakeholders. Advises NASA leadership on strategy, advocacy, and budget for relevant duties within NASA's Science Mission Directorate.
- Serves as NASA Program Scientist with oversight responsibility for instrument and mission science integrity on flight missions, including Suomi National Polar-orbiting Partnership

(NPP), Moderate Resolution Imaging Spectroradiometer (MODIS)-Terra, MODIS-Aqua, the Plankton, Aerosol, Cloud, ocean Ecosystem (PACE) mission; Deputy Program Scientist for the Terra and Aqua flight missions.

- Leads current mission concept development including Aerosols-Clouds, Convection and Precipitation (A-CCP) and Surface Biology and Geology (SBG).
- Oversees commercial data buy assessments for orbital platforms including on the International Space Station.
- Serves as Program Scientist for the Ocean Biology Distributed Active Archive Centers (DAAC) at NASA's Goddard Space Flight Center overseeing spaceborne flight mission development from advanced concept studies, flight hardware implementation, and on-orbit operation within the Earth Science Division.
- Leads and coordinates NASA Center workforce strategic planning (50-100 people, scientists and engineers) for relevant research across NASA's Earth Science Program.
- Develops budgets, policies and priorities for all programs in the relevant Program Scientist portfolio.
- Provides scientific and technical leadership for relevant activities and flight projects at NASA Field Centers, federal laboratories, academia, and private industry.
- Leads coordination with other NASA programs required for mission success.
- Serves as a liaison with the scientific and applications communities through NASA and federal advisory committees and other entities such as the National Academies of Sciences.
- Coordinates relevant NASA Earth Science activities with other federal agencies and the international community.
- Supports the broader ESD organization at NASA Headquarters through hiring, personnel management including performance evaluation, training, and awarding of promotion or awards.
- Promotes equal opportunity and diversity in the NASA workforce through involvement in NASA Employee Research Groups (e.g., Lesbian, Gay, Bisexual, Transgender, Queer, LGBTQ)
- Participates in national and international science and consensus building committees for research, including interagency efforts with the U.S. Global Change Research Program, the Carbon Cycle Science Program and the North American Carbon Program, and the International Ocean Color Coordinating Group (IOCCG) and CEOS.
- Leads NASA, interagency, domestic, and international workshops on research programs, topics, technology development and challenges.
- Leads development of relevant *in situ* and remote technology with the NASA Earth Science Technology Office (ESTO), including suborbital and *in situ* ocean instrumentation in partnership with other federal agencies.
- Oversees satellite, suborbital mission(s), and field and research programs for the relevant Program Scientist portfolio.

- Leads the development and maintenance of 25 year the Ocean Biology and Biogeochemistry research program strategic research and technology development plan (http://oceancolor.gsfc.nasa.gov/DOCS/OBB_Report_5.12.2008.pdf), updated in 2017).

January 2001-January 2003, *Assistant Professor*, Department of Marine Science, University of Southern Mississippi (USM-DMS), 1020 Balch Blvd., Stennis Space Center, MS, 39529.

- Designed, developed and managed state-of-the-art ocean color remote sensing program and laboratory. Initiated a research program in ocean color satellite remote sensing, specifically in ocean margin and coastal areas. Actively processed and analyzed imagery from ocean color sensors, and other physical fields, including sea surface temperature, sea surface height anomaly, weather and river flow data, along with oceanographic analyses. Maintained proficiency with Silicon Graphics and personal computer versions of IRIX, LINUX, VMWare, Matlab, Microsoft Office, Windows.
- Advised and served on thesis committees for graduate students pursuing Master of Science and Doctor of Philosophy degrees. Trained graduate students to conduct independent, computer-based ocean color remote sensing research connected with global climate change, computer programming and statistics.
- Served on departmental and University committees concerning student admissions, information technology, student welfare, and personnel assessment.
- Co-designed and authored technology plan to update USM-DMS system's administration, networking, and overall information technology and procedures; designed technology plan for USM-Hydrographic Science Research Center.
- Developed and taught two new undergraduate and graduate level courses in oceanography and remote sensing.
- Trained undergraduate students in shipboard collection of oceanographic data (CTD, phytoplankton) and overall deck operations and procedures (box cores, otter trawls, and phytoplankton and zooplankton net tows).
- Presented scientific seminars at government and state agencies, research and education-based institutions, national and international professional meetings.
- Reviewed (peer) scientific journal manuscripts.
- Authored state and government agency research announcements to secure government and state funding for the ocean remote sensing laboratory.

June 1996-January 2001, *Graduate Assistant*, Graduate School of Oceanography, University of Rhode Island, South Ferry Rd., Narragansett Bay Campus, Narragansett, Rhode Island, 02882.

- Completed doctoral dissertation degree, entitled "Remote Sensing of bio-optical water types, phytoplankton seasonality, and algal pigments in ocean margin waters".
- Gained proficiency in image processing and spatial analysis of CZCS, OCTS, and SeaWiFS data, ocean front-defining algorithms and approaches, ocean color sensor calibration and validation instrumentation and procedures, atmospheric correction approaches and processes, and associated computer systems administration, operating systems, hardware, and software
- Participated in weekly bio-optical sampling cruises for water quality assessment and *in situ* validation for aircraft sea surface temperature and phytoplankton pigment remote sensing in

Narragansett Bay, Rhode Island, with Environmental Protection Agency researchers.

- Served on departmental committees for Education Policy, Academic Search, and Graduate Student Council.

August-October 1999, *Summer Research Fellow*, North Atlantic Treaty Organization, United States of America Representative, NATO/SACLANT Undersea Research Center (SACLANTCEN), La Spezia, Italy.

- Assisted in development of ocean color remote sensing laboratory for image processing in support of international security.
- Processed and analyzed SeaWiFS ocean color (phytoplankton chlorophyll), Advanced Very High Resolution Radiometer (AVHRR) sea surface temperature, TOPEX-ERS2 sea surface height anomaly and geostrophic velocity data resulting in co-authorship of report on assessment and prediction of oceanographic front/feature effects on marine mammal migration.

March-April 1999, *Consultant*, Atmospheric and Environmental Research, Inc. (AER), Lexington, MA 02421.

- Analyzed optical data with Hydrolight Radiative Transfer code for development of new hyperspectral satellite remote sensor.

July-August 1998, *Selected Participant*, Optical Oceanography 590b, University of Washington/Office of Naval Research, Friday Harbor Laboratories, University of Washington, Friday Harbor, WA 98250.

- Participated in Optical Oceanography class involving intensive classroom and laboratory learning in optical oceanography and radiative transfer processes within the marine and atmospheric environments.
- Trained in use of optical and remote sensing instruments including AC-9, HiSTAR, ILAAS, VABAM, Hydrosat-6, Safire, ASD spectral reflectance meters, Satlantic Profiler, Coulter Counter, Hydrolight radiative transfer code.
- Completed research project, report, and national meeting presentation on “Variability in the backscattering coefficient of particles (b_{bp}) as a function of chlorophyll a in Case II waters”.
- Participated in optical oceanographic survey of East Sound, the Straits, and West Sound, WA. Collected hydrographic data (temperature, salinity, pigments) along with a host of optical data (AC-9, Hi-star, Hydrosat-6, Satlantic Profiler, LISST, radiometers, transmissometers, fluorometers).

June-August 1997, *Summer Research Fellow*, NASA/USRA, Universities Space Research Association/NASA/Goddard Space Flight Center Graduate Student Summer Program/Earth System Science: SeaWiFS Project Office, Laboratory for Hydrospheric Processes, Greenbelt, MD 20771.

- Developed and tested SeaDAS software for SeaWiFS visualization and data processing.
- Initiated processing of NASDA/JAXA’s Ocean Color and Temperature Scanner (OCTS) satellite data.
- Carried out research on spatial analyses of OCTS ocean color chlorophyll data in ocean margin areas.

- Presented initial images of and presentation on OCTS mission (atmospheric correction issues) to Ocean Color Research Team/NASA SIMBIOS (Sensor Intercomparison and Merger for Biological and Interdisciplinary Ocean Studies) meeting team.
- Delivered final presentation on “Preliminary Observations of Chlorophyll *a* in the U.S. South Atlantic Bight using the Ocean Color and Temperature Scanner (OCTS)”.

April 1995-June 1996, *Research Associate*, Institute for Marine Sciences, University of Southern Mississippi (USM-IMS), 1020 Balch Blvd., Stennis Space Center, Mississippi, 39529.

- Completed research on phytoplankton variability under variable Mississippi and Atchafalaya river flow conditions and in response to coastal physical processes (award funded by the Office of Naval Research), and authored final technical report on project.
- Co-developed two-dimensional model to understand Mississippi/Atchafalaya River and coastal physical oceanographic process effects on local phytoplankton distributions.
- Trained USM-IMS graduate students in phytoplankton taxonomy and systematics.
- Delivered several presentations on aforementioned research topics at national and international professional meetings.
- Participated in workshop to assess the causative factors and impacts of variable Gulf Coast hypoxic and anoxic zones on local marine ecosystems.

September 1992-March 1995, *Graduate Assistant Researcher*, Geochemical and Environmental Research Group/Texas A&M Univ., Department of Oceanography, College Station, TX 77843

- Completed Master of Science degree, entitled “Phytoplankton distributions and species composition across the Texas-Louisiana continental shelf during two flow regimes of the Mississippi River”.
- Gained proficiency in phytoplankton taxonomic work and biological data analyses using: MacIntosh and VAX systems, BluTech software languages.
- Trained Texas A&M University undergraduate honors oceanography students in CTD operation and overall deck operations and procedures including box cores, otter trawls, and phytoplankton and zooplankton net tows.
- Participated in and managed shipboard oceanographic research procedures over 94 ship days for the Louisiana Texas Shelf Physical Oceanography Program (LATEX) and a SCUBA-based benthic sampling program in the Caribbean Sea. LATEX program responsibilities included management of all deck and CTD operations.
- Participated in workshop to examine observations of potential harmful phytoplankton off the Sabine River during May 1994 for the Northwest Gulf of Mexico Fish Kill Meeting- Data Sharing sponsored by the National Marine Fisheries Service, Texas Parks and Wildlife Department.
- Served on University and departmental committees for student health services, oceanographic graduate council and graduate student council.

August – September 1992, *Student Technician*, Texas A&M University, Department of Oceanography, College Station, TX 77843.

- Executed laboratory trace metal analyses for various shellfish under Dr. Robert Presley

February 1991- May 1992, *Research Intern*, New England Aquarium, Edgerton Research Laboratory, Boston, MA 02110.

- Studied the sequestration of metals including lead and cadmium by the blue mussel, *Mytilus edulis*, in Boston Harbor and Savin Hill Cove, Massachusetts.

SELECTED SCIENTIFIC PUBLICATIONS, REPORTS, AND PRESENTATIONS

- P. S. Bontempi, I. Cetinić, R. Cooke. (In Review) Economically valuing satellite aquatic carbon observations. *Frontiers in Marine Science*.
- M. J. Behrenfeld, P. Gaube, A. Della Penna, R.T. O'Malley, W. J. Burt, Y. Hu, P. Bontempi, D. K. Steinberg, E.S. Boss, D. A. Siegel, C. A. Hostetler, P. Tortell, S. C. Doney. (In Revision) Global satellite observations of vertically migrating animals in the ocean's surface layer. *Nature*.
- Werdell, P.J., M.J. Behrenfeld, P.S. Bontempi, E. Boss, B. Cairns, G.T. Davis, B.A. Franz, U.B. Gliese, E.T. Gorman, O. Hasekamp, K.D. Knobelspiesse, A. Mannino, J.V. Martins, C.R. McClain, G. Meister, and L.A. Remer, 2019: The Plankton, Aerosol, Cloud, ocean Ecosystem (PACE) mission: Status, science, advances. *Bull. Amer. Meteor. Soc.*, doi:10.1175/BAMS-D-18-0056.1.
- Bontempi, P. S. 2017. (Invited Keynote) Imaging Earth's Ocean Gardens, Planned May 2017. Third International Ocean Color Science Team Meeting, Lisbon, Portugal.
- D A Siegel; M J Behrenfeld; S Maritorea; C R McClain; D Antoine; S W Bailey; P S Bontempi; E S Boss; H M Dierssen; S C Doney; R E Eplee, Jr.; R H Evans; G C Feldman; E Fields; B A Franz; N A Kuring; C Mengalt; N B Nelson; F S Patt; W S Robinson; J S Sarmiento; C M Swan; P J Werdell; T K Westberry; J G Wilding; J A Yoder (2013). Regional to Global Assessments of Phytoplankton Dynamics From The SeaWiFS Mission. *Remote Sensing of the Environment*. 135, 77–91.
- IOCCG. (2013). Mission requirements for future ocean colour sensors. McClain, C., Meister, G. (eds.), Reports of the International Ocean-Colour Coordinating Group, No. 13, IOCCG, Dartmouth, Canada.
- R. A. Duce, K. J. Benoit-Bird, J. Ortiz, R. Woodgate, P. Bontempi, M. Delaney, S. D. Gaines, S. Harper, B. Jones, and L. D. White (2013). Myths in Funding Ocean Research at the National Science Foundation. *EOS Transactions*, 93: (51) 533-534.
- R. Fine, R. Beardsley, P. Bontempi, J. Campbell, N. Chotiros, E. Klein, E. North, C. Olsen, C. Robles, W. Seyfried, D. Thomas (2010). Committee of Visitors Advises NSF Division of Ocean Sciences. *EOS Transactions*, 91 (8) 73-74.
- IOCCG. 2008. Why Ocean Colour? The Societal Benefits of Ocean-Colour Technology. Platt, T., Hoepffner, N., Stuart, V. and Brown, C. (eds.), Reports of the International Ocean-Colour Coordinating Group, No. 7, IOCCG, Dartmouth, Canada.
- IOCCG. 2007. Ocean-Colour Data Merging. Gregg, W. (ed.), Reports of the International Ocean-Colour Coordinating Group, No. 6, IOCCG, Dartmouth, Canada.
- Behrenfeld, M., P. Bontempi, H. Dierssen, P. DiGiacomo, S. Lohrenz, C. McClain, F. Muller-Karger, D. Siegel. 2007. P. Bontempi (ed.), Earth's Living Ocean: the Unseen World, Advance Plan for 25 years of Ocean Biology and Biogeochemistry Research (http://oceancolor.gsfc.nasa.gov/DOCS/OBB_Report_5.12.2008.pdf).
- Bontempi, P. S. 2006. (Plenary) A Future View of the Earth from Space: The role of ocean

- biology and biogeochemistry. Proceedings of Ocean Optics XVIII (CD-ROM), Montreal, Quebec, Canada, 9-13 October 2006.
- J. Campbell, D. Aurin, S. Bailey, P. Bontempi, M. Dowell, R. Frouin, H. Feng, P. Lyon, C. McClain, S. Maritorea, T. Moore, R. Morrison, J. O'Reilly, H. Sosik, C. Trees, J. Werdell. 2006. The Chlorophyll Algorithm Revisited: Results of the OCBAM Workshop, *Eos Transactions*, AGU, 87(36), Ocean Sci. Meet. Suppl., Abstract OS25R-15.
- C. R. McClain, S. B. Hooker, G. C. Feldman and P. S. Bontempi (2006). Satellite Data for Ocean Biology, Biogeochemistry, and Climate Research. *EOS Transactions*, 87: (34) 337-343.
- Walsh, J. J., J. K. Jolliff, B. P. Darrow, J. M. Lenes, S. P. Milroy, A. Remsen, D. A. Dieterle, K. L. Carder, F. R. Chen, G. A. Vargo, R. H. Weisberg, K. A. Fanning, F. E. Muller-Karger, E. Shinn, K. A. Steidinger, C. A. Heil, C. R. Tomas, J. S. Prospero, T. N. Lee, G. J. Kirkpatrick, T. E. Whitledge, D. A. Stockwell, T. A. Villareal, A. E. Jochens, and P. S. Bontempi. 2006. Red tides in the Gulf of Mexico: Where, when, and why?, *J. Geophys. Res.*, 111, C11003, doi:10.1029/2004JC002813
- Bontempi, P. S. and J. A. Yoder. 2003. Spatial Variability in SeaWiFS Imagery of the South Atlantic Bight as Evidenced by Gradients (Fronts) in Chlorophyll *a* and Water-Leaving Radiance." *Deep Sea Research. II: Topical Studies in Oceanography*. 51(10-11):1019-1032.
- Bontempi, P.S., C. DelCastillo, D. Roelke, S. Davis, and K.O. Winemiller. 2002. Transformation of allochthonous dissolved organic carbon in a tropical blackwater river as measured by fluorescence analysis: application to foodweb ecology. SPIE Ocean Optics 16, 6 p. online publication. Ocean Optics XVI Conference, Santa Fe, New Mexico, November 18-22, 2002.
- Bontempi, P.S. and J.A. Yoder. 2001. Determination of phytoplankton seasonality and phycobilipigment presence from ocean color remote sensing. NASA Ocean Color Research Team Meeting Abstracts, San Diego, California, May 2001.
- Bontempi, P. S. and J. A. Yoder. 2000. Bio-optical water mass and phytoplankton feature definition by frontal edge detection algorithms in ocean color satellite imagery. Proceedings of Ocean Optics XV (CD-ROM), Musée Océanographique, Monaco, 16-20 October 2000.
- Yoder, J.A., C. Chan, P.S. Bontempi, and J.A. Ward. 2000. Biological oceanographic applications of frontal edge detection in satellite imagery of ocean margin waters off the U.S. east coast. 2000 Ocean Sciences Meeting Abstract, American Society of Limnology and Oceanography/American Geophysical Union. San Antonio, Texas, January 2000.
- Bontempi, P. S. and C. A. N. Lyons. 1999. An assessment of oxygen, salinity, and phytoplankton distributions near an area off of Sabine Pass, Texas, characterized by demersal fish and marine mammal mortalities. NOAA Technical Report of the National Marine Fisheries Service 143- Characteristics and Causes of Texas Marine Strandings, Roger Zimmerman (ed.), pp. 1-12.
- Bontempi, P. S. 1999. Intensively learning optical oceanography: the influence of chlorophyll *a* on the backscattering coefficient by particles. 1999 Aquatic Sciences Meeting, American Society of Limnology and Oceanography. Santa Fe, NM, February 1999.
- Bontempi, P. S. and J. A. Yoder. 1999. Permanent and transient spatial patterns in chlorophyll *a* as remotely sensed by CZCS, OCTS, and SeaWiFS. 1999 Aquatic Sciences Meeting, American Society of Limnology and Oceanography. Santa Fe, NM, February 1999.
- Bontempi, P. S., W. W. Gregg, and J. A. Yoder. 1998. Initial observations of springtime surface chlorophyll *a* in shelf waters off the southeastern United States by the Ocean Color and

Temperature Sensor (OCTS). 1998 Ocean Sciences Meeting, American Geophysical Union, American Society of Limnology and Oceanography. San Diego, California, February 1998. EOS, Transactions, AGU, 79(1): OS28.

Bontempi, P. S., C. A. Neuhard Lyons, D. A. Wiesenburg, M. L. Parsons, and Q. Dortch. Phytoplankton distributions on the Louisiana continental shelf: A comparison of results from microscopic identification and phytoplankton pigment measurements. Proceedings of the 15th Information Transfer Meeting, Gulf of Mexico OCS region, Minerals Management Service, U. S. Department of the Interior, 12-14 December 1995.

HONORS/AWARDS

Ocean Sciences Award, The American Geophysical Union, 2019.

Fellow, The Oceanography Society, 2019.

Distinguished Performance, NASA, 2003-2019

Substantively Exceeds Expectations Performance Indicators

- Highly unusual creativity, initiative, or innovation
- Accomplishments/results that far exceeded the norm
- Development of techniques or processes that established a precedent for future endeavors, or a model for other employees to follow
- Anticipation and prevention of potential problems (in contrast to effective response to problems once they have occurred)
- Exceptional customer service in difficult situations
- Voluntary assumption of demanding additional tasks while continuing to achieve all expectations for regular duties

Distinguished Achievement Award, NASA, 2015

Awarded to any Government employee for a significant specific achievement or substantial improvement in operations, efficiency, service, financial savings, science, or technology which contributes to the mission of NASA. The criteria include: work-related achievements yielding high-quality results and/or substantial improvement that supports the Agency mission; innovative approaches used in the conception, design, or execution of the individual's work; impact and importance of the individual's achievement related to the Agency's goals and image.

Cooperative External Achievement Award, NASA, 2011

Outstanding achievement in fostering domestic and international partnerships to further NASA's interests.

Exceptional Service Medal, NASA, 2007

NASA's highest form of recognition that is awarded to a Government employee who, by distinguished service, ability, or vision has personally contributed to NASA's advancement of United States' interests. The individual's achievement or contribution must demonstrate a level of excellence that has made a profound or indelible impact on NASA mission success, and therefore, the contribution is so extraordinary that other forms of recognition by NASA would be inadequate.

Peer Award, Sun-Earth System Division, NASA, 2006

NASA Headquarters peers vote the top employee of the Division. Peer awards were abolished in 2006.

Peer Award, Office of Earth Science, NASA, 2005

NASA Headquarters peers vote the top employee of the Office.

Exceptional Performance Award, Office of Earth Science, NASA, 2005

Demonstrated leadership in the Office of Earth Science. Exceptional Performance Awards were abolished in 2005.

Terra Award, Peer-Nominated Achievement, Office of Earth Science, NASA, 2004

Award given to the top scientist in NASA Headquarters voted on by the NASA Headquarters scientists. The award was abolished in 2004.

Peer Award, Office of Earth Science, NASA, 2004

NASA Headquarters peers vote the top employee of the Division.

Exceptional Performance Award, Office of Earth Science, NASA, 2004

Demonstrated leadership in the Office of Earth Science. Exceptional Performance Awards were abolished in 2005.

Performance Award, Office of Earth Science, NASA Headquarters, 2003

For exceptional performance in strategic audits of administrative process within the Office of Earth Science.

Student Award, The Oceanography Society, Biennial Meeting, April 2001

Ada L. Sawyer Award, Graduate School of Oceanography, University of Rhode Island, 2000

Summer Research Fellow-NATO, United States of America Representative, Summer Research Assistant Programme, NATO/SACLANT Undersea Research Center (SACLANTCEN), La Spezia, Italy, August-October 1999

GSO Alumni Award, Graduate School of Oceanography, University of Rhode Island, 1998

Selected Participant, Optical Oceanography 590b, Friday Harbor Laboratories, University of Washington, Friday Harbor, Washington, 19 July-23 August 1998

Summer Research Fellow-NASA/USRA, Universities Space Research

Association/NASA/Goddard Space Flight Center Graduate Student Summer Program/Earth System Science: SeaWiFS Project Office, Laboratory for Hydrospheric Processes, Greenbelt, MD, June-August 1997

Distinguished Graduate Student Award Nominee- Master's Level, Texas A&M University, 1995

Webber Scholarship Recipient, Department of Oceanography, Texas A&M University, 1992

Volunteer of the Month, New England Aquarium, March 1992

INTERAGENCY AND INTERNATIONAL ACTIVITIES AND COMMITTEES

Current

National:

United States Global Change Research Program (USGCRP) Carbon Cycle Interagency Working Group (CCIWG), NASA, member 2003-present and Co-Chair 2008-2010; CCIWG liaison to U.S. Carbon Cycle Science Working Group, 2008-2012; Ecosystems Interagency Working Group (EIWG), NASA, member 2003-present;

United States Executive Order on Oceans Committees (2003-present): staff/plus one for NASA Administrator and Deputy Administrator, respectively, on Ocean Policy Committee; NASA representative for Subcommittee on Ocean Science and Technology; former Subcommittee on the Integrated Management of Ocean Resources; Interagency Working Group on Facilities; Harmful Algal Bloom and Hypoxia Research and Control Act (HABHRCA); Gulf of Mexico Alliance; Interagency Working Group on Ocean Acidification (IWG-OA); Interagency Working Group on Ocean and Coastal Mapping (IWG-OCM); Interagency Ocean Observation Committee (IOOC); Metrics for Ocean Observing (IWG-MOOS)

Ecology and Oceanography of Harmful Algal Blooms (ECOHAB) – NASA representative
U.S. Coral Reef Task Force – NASA representative
American Geophysical Union, Ocean Sciences Section, Agency Representative, 2014-present

International:

International Ocean Color Coordinating Group (IOCCG); Committee on Earth Observing Satellites Ocean Color Radiometry Virtual Constellation (CEOS OCR-VC), lead for development and implementation of CEOS InTercomparison and Uncertainty assessment for Ocean Colour Radiometry (INSITU-OCR); Committee on Space Research (COSPAR); NASA representative to the International Geosphere-Biosphere Programme's (IGBP) Integrated Marine Biogeochemistry and Ecosystem Research (IMBER) and Surface Ocean Lower Atmosphere Study (SOLAS); NASA lead for partnerships/bilateral negotiations on PACE mission development; NASA lead for Indian Space Research Organization-NASA-NOAA Technical Working Group on OceanSat-2 and OceanSat-3 data exchange; NASA partner on data sharing exchange efforts with the European Space Agency for Sentinel-3 missions; NASA partners with Japan Aerospace Exploration Agency's (JAXA) Second-Generation Global Imager on the Global Change Observation Mission-C for data exchange; NASA lead for South Korea's Korean Space Agency and Korean Ocean Satellite Center-NASA Technical Working Group on the Communication, Ocean, and Meteorological Satellite (COMS)-Geostationary Ocean Color Imager (GOCI) and associated field campaigns (KORUS-OC); United Nations World Ocean Assessment Author and Reviewer (2008-present); IPCC AR-5 reviewer

Historical

National Ocean Council and Deputy Committees (4H, 2H, etc.) 2008-2017
NASA-NOAA Joint Working Group (Research to Operations Transition) member (2003-2013)
National Science Foundation's Geosciences Directorate/Ocean Sciences Division Committee of Visitors (review committee), June 2012
National Science Foundation's Geosciences Directorate/Ocean Sciences Division Committee of Visitors (review committee), June 2009
AGU Committee for Renewing Investment in Ocean Research, 2009
Faculty-Student Liaison, University of Southern Mississippi, Department of Marine Science, September 2001-December 2002
Personnel Committee, University of Southern Mississippi, Department of Marine Science, September 2001-December 2002
Admissions Committee, University of Southern Mississippi, Department of Marine Science, September 2001- December 2002
Technology Committee, University of Southern Mississippi, Department of Marine Science, January 2001- December 2002
Educational Policy Committee- Student Representative, Graduate School of Oceanography, University of Rhode Island, 1998-1999

SELECTED LIST OF RESEARCH COLLABORATORS

Kirk Winemuller (Texas A&M), Dan Roelke (Texas A&M), Watson Gregg (NASA-Goddard Space Flight Center), Farid Askari (NATO-SACLANTCEN), Angela D'Amico (NATO-SACLANTCEN), Paul Hargraves (Univ. of Rhode Island), Quay Dortch (LSU/LUMCON),

Michael Parsons (Louisiana State University), Marianne Farrington (New England Aquarium), Greta Fryxell (Texas A&M Univ.), Bradley Pedersen (Mote Marine Laboratory), Carrie Neuhard Lyons (Texas A&M Univ.), Christine Chan (Univ. of Rhode Island), Jessica Ward (Naval Undersea Warfare College- Newport, RI)

STUDENTS ADVISED

Academic Advisor: Michael Michalski (M.S.), Callie Hall (Ph.D.), Vanessa Wright (M.S.)
Thesis Committee Member: Joseph Tegeder (M.S.), Bruce Spiering (Ph.D.), Callie Hall (M.S.), Kevin Mahoney, (Ph.D.)

TEACHING EXPERIENCE- FORMAL COURSE

Astronaut Training-Earth Observations from Space (Oceanography), NASA-Johnson Space Center, Houston, Texas, 15 astronaut corps members, May 2010, May 2014

Application of Remote and In-situ Ocean Optical Measurements to Ocean Biogeochemistry, University of Maine-Darling Marine Center, 25 students, Summer 2007

Introduction to Ocean Science- Marine Science 151 and 151Honors, University of Southern Mississippi, Hattiesburg, Mississippi, 60-70 undergraduate students, science and non-science majors, Spring 2001, Spring 2002

Remote Sensing of the Ocean- Marine Science 602, University of Southern Mississippi, Stennis Space Center, Mississippi, 5-10 graduate and professional students, Fall 2001

PROFESSIONAL SOCIETY MEMBERSHIPS

American Geophysical Union

American Society of Limnology and Oceanography

Sigma Xi Scientific Research Society

The Oceanography Society

