

Kevin Arrigo

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Donald & Donald M. Steel Professor in Earth Sciences; Victoria and Roger Sant Director, Earth Systems Program



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Internet Links:

- [Ocean Biogeochemistry Group](#)

Bio	Research & Scholarship	Teaching	Publications
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- Professor, [Earth System Science](#)
- Member, [Bio-X](#)
- Affiliate, [Stanford Woods Institute for the Environment](#)

Kevin Arrigo received his B.S in Natural Resources from the University of Michigan in 1983. After working for the Michigan Department of Natural Resources, he attended the University of Southern California where he earned his Ph.D. in Biological Sciences in 1992. He went on to a postdoctoral position at the NASA Goddard Space Flight Center and became a civil servant there in 1995. In 1999, he joined the Stanford University faculty as an Assistant Professor in the Department of Geophysics, where he stayed until 2007 when he joined the Department of Environmental Earth System Science. Arrigo served as director of the interdisciplinary Graduate Program in Earth, Energy, and Environmental Sciences from 2005-2013. In 2012, he became co-director of the Earth Systems Program within the School of Earth Sciences. He has served on a number of university committees, including the Committee on Academic Computing and Information Services (2010-2012), Committee for the Review of Undergraduate Majors (2010-2013), and the Bing Overseas Studies Faculty Oversight Committee (2011-present). As a biological oceanographer, his principal interest has been in the role marine microalgae play in modulating the cycling of carbon and nitrogen, with particular emphasis on the scales of temporal and spatial variability of biological productivity in polar oceans. This knowledge is essential to understanding how anthropogenic and atmospheric forcing controls the biogenic flux of carbon dioxide into the oceans, and ultimately, to the sediments. His research is highly interdisciplinary and incorporates three fundamental approaches, (1) satellite remote sensing, (2) ecophysiological modeling, and (3) laboratory and field studies. By combining these techniques, it is possible to address many complex aspects of ocean biogeochemistry at spatial and temporal scales that would not be possible using a single approach

Administrative Appointments

- Fisheries Biologist, Department of Natural Resources, State of Michigan (1984 - 1986)
- Teaching Assistant, Department of Biological Sciences, University of Southern California (1986 - 1991)
- Research Assistant, Department of Biological Sciences, University of Southern California (1987 - 1992)
- Resident Research Assistant, NASA Goddard Space Flight Center (1992 - 1994)
- Adjunct Assistant Professor MEES, Horn Point Environmental Laboratory, University of Maryland (1993 - 1999)
- Assistant Research Professor Dept. of Meteorology, University of Maryland (1994 - 1995)
- Adjunct Assistant Professor Dept. of Meteorology, University of Maryland (1994 - 1999)
- Oceanographer, NASA Goddard Space Flight Center (1995 - 1999)
- Assistant Professor of Geophysics, Stanford University (1999 - 2004)
- Associate Professor of Geophysics, Stanford University (2004 - 2007)
- Director, Graduate Program in Earth, Energy, and Environmental Sciences, School of Earth Sciences, Stanford University (2005 - 2010)
- Associate Chair, Department of Environmental Earth System Science, Stanford University (2007 - Present)
- Associate Professor, Department of Environmental Earth System Science, Stanford University (2007 - 2009)
- Professor, Department of Environmental Earth System Science, Stanford University (2009 - Present)

Honors and Awards

- Competitive Scholarship, Oakland University (1977 - 1979)
- Competitive Scholarship, State of Michigan (1980 - 1983)
- Cum Laude, University of Michigan (1983)
- Outstanding Teaching Assistant Award, University of Southern California (1987 - 1991)
- Antarctic Service Medal, National Science Foundation (1988 - 1989)
- ARCS Fellowship, University of Southern California (1990 - 1992)
- Global Change Distinguished Postdoctoral Fellowship, United States Department of Energy (1992 - 1994)
- Peer Award for Outstanding Publication, NASA GSFC, Laboratory for Hydrospheric Processes (1995)
- Performance Award, NASA Goddard Space Flight Center (1995)
- Special Act Award, NASA Goddard Space Flight Center (1995)
- Quality Increase Award, NASA Goddard Space Flight Center (1996)
- Special Act Award, NASA Goddard Space Flight Center (1997)
- Frederick E. Terman Fellowship Award, School of Earth Sciences, Stanford University (1999-2002)
- Chair, Gordon Research Conference on Polar Marine Science, Gordon Research Conference (2007)
- School of Earth Sciences Excellence in Teaching Award, Stanford University (2008)
- Aldo Leopold Leadership Fellowship, Woods Institute for the Environment, Stanford University (2009)
- Gerhard Caspar University Fellow in Undergraduate Education, Stanford University (2011-2016)
- Group Achievement Award for ICESCAPE, NASA (2012)
- Donald & Donald M. Steel Professor in Earth Sciences, Stanford University (2013-present)

University Service and Professional Activities

- Director, Earth Systems Program, Stanford University (2015 - Present)
- Associate Editor, Journal of Geophysical Research - Biogeochemistry (2012 - Present)
- Co-Director, Earth Systems Program, School of Earth Sciences, Stanford University (2012 - 2015)
- Aldo Leopold Leadership Program Committee, Stanford University (2011 - Present)
- Bing Overseas Studies Program, Faculty Oversight Committee, Stanford University (2011 - Present)
- Advisory Board, Alliance for Climate Education (2010 - Present)
- Committee for the Review of Undergraduate majors (C-RUM), Stanford University (2010 - 2013)
- Faculty of 1000, Contributing Member, Ecosystem Ecology (2010 - 2013)
- Committee on Academic Computing and Information Services (C-ACIS), Stanford University (2010 - 2011)
- E-IPER Reauthorization Review Committee, Stanford University (2010 - 2010)
- Environmental Ventures Project, Woods Institute for the Environment, Review Committee, Stanford University (2009 - 2012)
- Invited Speaker, Recent changes in Arctic Ocean Primary Production. Gordon Research Conference on Polar Marine Science, Lucca (Barga), Italy, March 15-20, Gordon Research Conference (2009 - 2009)
- Invited Speaker, University of California Santa Cruz, 19 January 2009, University of California Santa Cruz (2009 - 2009)
- Invited Speaker, Using remote sensing to monitor oceans and ice. Southern Ocean Sentinel program, Hobart, Tasmania (Australia), April 20-25, Southern Ocean Sentinel program (2009 - 2009)
- Board of Governors, Alternate, Ocean Leadership (2008 - Present)
- Center for Ocean Solutions Early Career Fellowship, Selection Committee, Stanford University (2008 - Present)
- Review Editor, Aquatic Biology (2008 - Present)
- Earth Systems Undergraduate Curriculum Committee, Stanford University (2008 - 2012)
- Library Committee, School of Earth Sciences, Stanford University (2008 - 2012)
- Advisory Committee for Educational Outreach, School of Earth Sciences, Stanford University (2008 - 2011)
- Branner Library Space Committee, School of Earth Sciences, Stanford University (2008 - 2010)
- Chair, School of Earth Sciences Faculty Search Committee, Marine Chemist/Geochemist, Stanford University (2008 - 2010)
- School of Earth Sciences Faculty Search Committee, Climate scientist, Stanford University (2008 - 2009)
- Invited Speaker, Changes in Arctic Ocean primary production, 1998-2008, Arctic Change 2008, Quebec City, Quebec, Canada, December 9-12, Arctic Change 2008 (2008 - 2008)
- Associate Chair, Department of Environmental Earth System Science, Stanford University (2007 - Present)
- Oceans Working Group, Canadian Institute for Advanced Research (CIFAR) (2007 - 2009)
- Chair, Gordon Research Conference on Polar Marine Science, Ventura, CA, March 25-30, Gordon Research Conference (2007 - 2007)
- Invited Speaker, C.B. van Niel Lecture, Hopkins Marine Station, Stanford University, April 6, Hopkins Marine Station, Stanford University (2007 - 2007)
- Invited Speaker, Duke University, 12 January, Duke University (2007 - 2007)
- Invited Speaker, Nicholas School Marine Laboratory, Duke University, 1 May, Duke University (2007 - 2007)
- Editorial Board, Annual Reviews of Marine Science (2006 - 2012)
- Chair, School of Earth Sciences Faculty Search Committee, Physical Oceanographer, Stanford University (2006 - 2007)
- Committee for School of Earth Sciences Reorganization, Stanford University (2006 - 2007)
- Invited Participant, SCOR Workshop on Anthropogenic Nitrogen Impacts on the Open Ocean, Norwich, UK, 16-20 November, Scientific Committee on Oceanic Research (2006 - 2006)

- Working Group for Carbon Research, IMBER/SOLAS (2005 - 2011)
- Director, Graduate Program in Earth, Energy, and Environmental Sciences, Stanford University (2005 - 2010)
- CEES Faculty Advisory Board, Stanford University (2005 - 2009)
- Understanding Change Panel (UCP), Study of Environmental Arctic Change (SEARCH) (2005 - 2008)
- School of Earth Sciences Faculty Search Committee, Climate scientist, Stanford University (2005 - 2007)
- Appointment Committee, Suki Hoagland-Senior Lecturer in IPER, Stanford University (2005 - 2005)
- Geological and Environmental Sciences Faculty Search Committee, Paleobiology, Stanford University (2005 - 2005)
- Invited Speaker, Oregon State University, 7 December, Oregon State University (2005 - 2005)
- Vice-Chair, Gordon Research Conference on Polar Marine Science, Gordon Research Conference (2005 - 2005)
- School of Earth Sciences Council, Stanford University (2004 - 2010)
- Board of Governors, Alternate, Ocean Leadership (2004 - 2008)
- Chair, School of Earth Sciences Ph.D/M.S. Academic Programs Committee, Stanford University (2004 - 2005)
- Geophysics Faculty Search Committee, Computational Global Seismology, Stanford University (2004 - 2005)
- Invited Speaker, Oregon State University, December 2, Oregon State University (2004 - 2004)
- Member, The Bering Sea Ecological Study (BEST) Committee, National Science Foundation (2003 - 2006)
- Carnegie Institute of Washington, Global Ecology/Oceanographer Search Committee, Stanford University (2003 - 2005)
- Committee on A Science Plan for the North Pacific Research Board, National Research Council of the National Academies (2003 - 2005)
- Member, Committee on A Science Plan for the North Pacific Research Board, National Research Council of the National Academies (2003 - 2005)
- Planning committee for the Bering Sea Ecological Study (BEST), National Science Foundation (2003 - 2005)
- Geophysics Faculty Pre-Search Committee, Stanford University (2003 - 2004)
- School of Earth Sciences Academic Programs Committee, Stanford University (2003 - 2004)
- Invited Speaker, Aquatic Sciences Meeting, Salt Lake City, American Society of Limnology and Oceanography (2003 - 2003)
- Invited Speaker, EGS-AGU-EUG Joint Assembly, Nice, France, EGS-AGU-EUG (2003 - 2003)
- Invited Speaker, Gordon Research Conference on Polar Marine Science, Ventura, California, Gordon Research Conference (2003 - 2003)
- Invited Speaker, The Bering Sea Ecological Study (BEST) Workshop, Seattle, Washington, The Bering Sea Ecological Study (BEST) (2003 - 2003)
- Invited Speaker, The Royal Society (The Role of the Southern Ocean in Global Processes: An Earth System Science Approach), London, The Royal Society (2003 - 2003)
- Invited Speaker, University of Southern California, Los Angeles, CA, January 28, University of Southern California (2003 - 2003)
- Faculty Liaison, The Australia Program, Overseas Studies Program, Stanford University (2002 - Present)
- Earth Systems Executive Committee, Stanford University (2002 - 2012)
- Academic Advisor for Sophomores, Stanford University (2002 - 2009)
- Editor, Oceanography of the Ross Sea, Antarctic Science (2002 - 2002)
- Invited Speaker, Hopkins Marine Station, Stanford University, January 25, Hopkins Marine Station, Stanford University (2002 - 2002)
- Invited Speaker, United States Geological Survey, Menlo Park, CA, December, United States Geological Survey (2002 - 2002)
- Invited Speaker, University of California, Irvine, April 19, University of California, Irvine (2002 - 2002)
- Invited Speaker, University of California, Santa Barbara, March 12, University of California, Santa Barbara (2002 - 2002)
- Academic Advisor for Freshmen, Stanford University (2001 - 2008)
- Interdisciplinary Graduate Program In Environment and Resource (IPER) Advisory Council, Stanford University (2001 - 2008)
- Stanford's Environmental Initiative, Stanford University (2001 - 2004)
- Invited Speaker, International Polynya Symposium 2001, Polynyas in Changing Polar Seas, International Polynya Symposium 2001 (2001 - 2001)
- Invited Speaker, Romberg Tiburon Center, San Francisco State University (2001 - 2001)
- Panel on Biocomplexity in the Environment/Instrumentation Development for Environmental Activities, National Science Foundation (2001 - 2001)
- Chair, Department of Geophysics Teaching & Technology Committee, Stanford University (2000 - 2007)
- Ad-hoc Committee for Interdisciplinary Environmental Studies, Stanford University (2000 - 2005)
- Curriculum Committee, Geophysics Dept., Stanford University (2000 - 2004)
- Strategic Planning Committee, Geophysics Dept., Stanford University (2000 - 2004)
- Technology and Teaching Committee, Geophysics Dept., Stanford University (2000 - 2004)
- Faculty/Staff Development Committee, Geophysics Dept., Stanford University (2000 - 2003)
- Member, AGU Committee on Statutes and Bylaws, American Geophysical Union (2000 - 2003)
- Invited speaker, UC Santa Cruz (2000 - 2000)
- Member, DOE Panel on Ocean Carbon Sequestration Research, Department of Energy (2000 - 2000)
- Invited speaker, Gordon Research Conference (1998 - 1998)
- Council of Fellows, Joint Center for Earth System Science, Dept. of Meteorology, University of Maryland (1997 - 1997)
- Editor, Vol. 73, Antarctic Research Series (1997 - 1997)
- Invited speaker, NASA Goddard Space Flight Center (1997 - 1997)
- NASA Earth Science Vision team, NASA (1997 - 1997)
- Visiting Senior Scientist Search Committee, Laboratory for Hydrospheric Processes, NASA (1997 - 1997)

Education

- Ph.D., University of Southern California, Biology (1992)
- B.S., University of Michigan, Natural Resources (1983)

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