

CURRICULUM VITAE

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Climate, Atmospheric Science and Physical Oceanography (CASPO) Division
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BIRTH: July 6, 1958 Cleveland, Ohio

DEGREES: 1980 B.S. in Physical Oceanography
Florida Institute of Technology

1986 Ph.D. in Physical Oceanography
Scripps Institution of Oceanography, UCSD

POSITIONS HELD:

2000-present Research Oceanographer
Senior Lecturer in Climate Sciences

2015-present Head, Oceans and Atmosphere Section

2010-2015 Director, CASPO Division

2009-2010 Associate Director, CASPO Division

2008-2009 Director, CASPO Division

2007-2008 Associate Director, CASPO Division

2000-2007 Associate Director, Climate Research Division
Scripps Institution of Oceanography

1996-2000 Associate Research Oceanographer
Lecturer in Climate Sciences
Climate Research Division
Scripps Institution of Oceanography

1988-1996 Assistant Research Oceanographer
Climate Research Division
Scripps Institution of Oceanography

1992-1994 Scientist (while on leave from SIO)
SACLANT Undersea Research Centre, La Spezia, Italy

1991 Orson Anderson Visiting Scholar
IGPP, Los Alamos National Laboratory, Los Alamos, NM

- 1988 Lecturer (while at SIO)
Department of Geography, San Diego State University
- 1986-1988 Andrew W. Mellon Foundation Postdoctoral Fellow
Climate Research Group
Scripps Institution of Oceanography
- 1980-1986 Research Assistant
Institute of Geophysics and Planetary Physics
Scripps Institution of Oceanography
- 1980 Physicist
Naval Research Laboratory, Orlando, Florida

PROFESSIONAL

SOCIETIES: American Meteorological Society, American Geophysical Union,
The Oceanography Society

RESEARCH

INTERESTS: Ocean and Coupled Ocean-Atmosphere Modeling and Dynamics,
Pacific Decadal Variability, Marine Ecosystem Response to Climate,
Ocean Data Assimilation, Predictability, Rossby Waves, Long-Period Tides

PUBLICATIONS

SUMMARY: Refereed publications: ~113
Total citations: over 4500 (Web of Science); over 7200 (Google Scholars)
H-Index (N papers with N citations): 32 (WoS); 40 (GS)
Papers exceeding 100 citations: 12 (WoS); 18 (GS)

DISSERTATION:

Miller, A. J., 1986: Barotropic planetary-topographic oscillations in ocean basins. Ph.D. dissertation. Scripps Institution of Oceanography, University of California, San Diego, 133 pp.

REFEREED PUBLICATIONS:

- Miller, A. J., 1986: Non-divergent planetary oscillations in mid-latitude ocean basins with continental shelves. *Journal of Physical Oceanography*, **16**, 1914-1928.
- Miller, A. J., W. R. Holland and M. C. Hendershott, 1987: Open-ocean response and normal mode excitation in an eddy-resolving general circulation model. *Geophysical & Astrophysical Fluid Dynamics*, **37**, 253-278.
- Miller, A. J., 1989: On the barotropic planetary oscillations of the Pacific. *Journal of Marine Research*, **47**, 569-594.
- Miller, A. J. and J. O. Roads, 1990: A simplified coupled model of extended-range predictability. *Journal of Climate*, **3**, 523-542.

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- Miller, A. J., D. S. Luther and M. C. Hendershott, 1993: The fortnightly and monthly tides: Resonant Rossby waves or nearly equilibrium gravity waves? *Journal of Physical Oceanography*, **23**, 879-897.
- Miller, A. J., T. P. Barnett and N. E. Graham, 1993: A comparison of some tropical ocean models: Hindcast skill and El Nino evolution. *Journal of Physical Oceanography*, **23**, 1567-1591.
- Miller, A. J., D. R. Cayan, T. P. Barnett, N. E. Graham and J. M. Oberhuber, 1994: Interdecadal variability of the Pacific Ocean: Model response to observed heat flux and wind stress anomalies. *Climate Dynamics*, **9**, 287-302.
- Miller, A. J., D. R. Cayan, T. P. Barnett, N. E. Graham, J. M. and Oberhuber, 1994: The 1976-77 climate shift of the Pacific Ocean. *Oceanography*, **7**, 21-26.
- Miller, A. J., H. G. Arango, A. R. Robinson, W. G. Leslie, P.-M. Poulain and A. Warn-Varnas, 1995: Quasigeostrophic forecasting and physical processes of Iceland-Faroe Frontal variability. *Journal of Physical Oceanography*, **25**, 1273-1295.
- Miller, A. J., P.-M. Poulain, A. R. Robinson, H. G. Arango, W. G. Leslie and A. Warn-Varnas, 1995: Quantitative skill of quasigeostrophic forecasts of a baroclinically unstable Iceland-Faroe Front. *Journal of Geophysical Research-Oceans*, **100**, 10,833-10,849.
- Cayan, D. R., A. J. Miller, T. P. Barnett, N. E. Graham, J. N. Ritchie and J. M. Oberhuber, 1995: Seasonal-interannual fluctuations in surface temperature over the Pacific: Effects of monthly winds and heat fluxes. In: *Natural Climate Variability on Decadal-to-Century Time Scales*, National Academy Press, pp. 133-150
- Robinson, A. R., H. G. Arango, A. J. Miller, P.-M. Poulain, A. Warn-Varnas and W. G. Leslie, 1996: Real time operational forecasting on shipboard of the Iceland-Faroe frontal variability. *Bulletin of the American Meteorological Society*, **77**, 243-259.
- Robinson, A. R., H. G. Arango, A. Warn-Varnas, W. G. Leslie, A. J. Miller, P. J. Haley and C. J. Lozano, 1996: Real-time regional forecasting. In: *Modern Approaches to Data Assimilation in Ocean Modeling*, P. Malanotte-Rizzoli, ed., Elsevier Science, B.V., pp. 377-410.
- Miller, A. J., 1996: Recent advances in California Current modeling: Decadal and interannual thermocline variations. In: *California Cooperative Oceanic Fisheries Investigations Reports*, **37**, 69-79.
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- Miller, A. J., P. F. G. Lermusiaux and P.-M. Poulain, 1996: A topographic-Rossby mode resonance over the Iceland-Faeroe Ridge. *Journal of Physical Oceanography*, **26**, 2735-2747.

- Miller, A. J., W. B. White and D. R. Cayan, 1997: North Pacific thermocline variations on ENSO time scales. *Journal of Physical Oceanography*, **27**, 2023-2039.
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- Seo, H., A. J. Miller and J. R. Norris, 2016: Eddy-wind interaction in the California Current System: Dynamics and impacts. *Journal of Physical Oceanography*, **46**, 439-459.

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- Stukel, M. R., L. I. Aluwihare, K. A. Barbeau, A. M. Chekalyuk, R. Goericke, A. J. Miller, M. D. Ohman, A. Ruacho, H. Song, B. M. Stephens and M. R. Landry, 2017: Mesoscale ocean fronts enhance carbon export due to gravitational sinking and subduction. *Proceedings of the National Academy of Sciences*, **114**, 1252-1257.
- Bromirski, P. D., R. E. Flick and A. J. Miller, 2017: Storm surge along the Pacific Coast of North America. *Journal of Geophysical Research-Oceans*, **122**, 441–457.
- Yi, D. L., B. Gan, L. Wu and A. J. Miller, 2018: The North Pacific Gyre Oscillation and mechanisms of its decadal variability in CMIP5 models. *Journal of Climate*, **31**, 2487-2509.
- Stukel, M. R., H. Song, R. Goericke and A. J. Miller, 2018: The role of subduction and gravitational sinking in particle export, carbon sequestration, and the remineralization length scale in the California Current Ecosystem. *Limnology and Oceanography*, **63**, 363-383.
- Pullen, J., R. Allard, H. Seo, A. J. Miller, S. Chen, L. P. Pezzi, T. Smith, P. Chu, J. Alves and R. Caldeira, 2017: Coupled ocean-atmosphere forecasting at short and medium time scales. *Journal of Marine Research*, **75**, 877–921.
- Amaya, D., N. Siler, S.-P. Xie and A. J. Miller, 2018: The interplay of internal and forced modes of Hadley Cell expansion: Lessons from the global warming hiatus. *Climate Dynamics*, **51**, 305-319.
- Lennert-Cody, C. E., S. C. Clarke, A. Aires-da-Silva, M. N. Maunder, P. J. S. Franks, M. Román, A. J. Miller and M. Minami, 2018: The importance of environment and life stage on interpretation of silky shark relative abundance indices for the equatorial Pacific Ocean. *Fisheries Oceanography*, in press.
- Dias, D. F., A. Subramanian, L. Zanna and A. J. Miller, 2018: Remote and local influences in forecasting Pacific SST: A Linear Inverse Model and a multimodel ensemble study *Climate Dynamics*, in press.

SCIENTIFIC SERVICE:

Associate Editor, *Atmospheric Science Letters* (Royal Meteorological Soc.), 2000-present

Associate Editor, *Journal of Geophysical Research-Oceans* (AGU), 2007-2013

Special Issue Editorial Board, *Dynamics of Atmospheres and Oceans*, 2010-2011

Special Issue Editorial Board, *Journal of Oceanography* (The Oceanographic Society of Japan), 2002

Advisory Board, *The Sea, Volume 17: The Science of Ocean Prediction*, 2013-2015

Reviewer for *Journal of Physical Oceanography*, *Journal of Climate*,
Journal of Geophysical Research-Oceans, *Geophysical Research Letters*,
Journal of Geophysical Research-Atmospheres, *Tellus-A*, *Tellus-B*,
Dynamics of Atmospheres and Oceans, *Journal of the Atmospheric Sciences*,
Fisheries Oceanography, *Journal of Marine Systems*, *Progress in Oceanography*,
Oceanologica Acta, *EOS*, *Deep-Sea Research*, *Conservation Biology*,
Canadian Journal of Fisheries and Aquatic Sciences, *Journal of Marine Research*,
International Journal of Remote Sensing, *Journal of Oceanography*, *Oceanography*,
Bulletin of the American Meteorological Society, *Climate Dynamics*,
Atmosphere-Ocean, *Journal of Oceanic and Atmospheric Technology*,
CalCOFI Reports, *Atmospheric Research*, *Monthly Weather Review*,
International Journal of Climatology, *ICES Journal of Marine Science*,
Continental Shelf Research, *Proceedings of the National Academy of Sciences*,
Journal of Coastal Research, *Ocean Science*, *Marine Geodesy*, *Fish and Fisheries*,
PLoS ONE, *Limnology and Oceanography: Fluids and Environments*,
Ocean Modeling, *Nature Scientific Reports*, *Marine and Freshwater Research*,
Journal of Sea Research, *Science Advances*, United Nations University Press and
Cambridge University Press.

Reviewer for NSF, NOAA, NASA, PFRP, NPRB, California Sea Grant, Oregon Sea Grant, GoMRI, Louisiana Board of Regents, University of Wisconsin-Madison, CEC, IRI, NCAR, EVOSTC, CRDF, NERC (UK), Marsden Fund (New Zealand), Marine National Facility (Australia), ARC (Australia), OSR (Netherlands), AXA (EU), BSF (Israel-USA), KAUST, and Kuwait Foundation for the Advancement of Sciences

Panelist for NSF Ocean Sciences Division, NSF GLOBEC, NSF Arctic, NOAA CLIVAR, NASA MAP, NOAA-NSF CAMEO, GoMRI "Theme 1", and University of Wisconsin "Research Growth Initiative"

Program Review Panel Member for NOAA Joint Institute for the Study of the Atmosphere and Ocean (JISAO - University of Washington), NOAA Joint Institute for Marine Research (JIMAR - University of Hawaii), Oceanography and Marine Geosciences of NRL-Stennis Space Center, and NSF Life Cycle Objectives for Ocean Observing Initiative Cyberinfrastructure Implementing Organization

Member, American Meteorological Society Committee on Coastal Environment (2013-present)

Reichelderfer Award Committee, American Meteorological Society (Chair, 2018;
Member, 2016, 2017)

Member, CLIVAR Research Focus Group on “Eastern Boundary Upwelling Systems”
(2015-present)

Member, NOAA MAPP “Marine Prediction Task Force” (2017-present)

Member, U.S. CLIVAR Science Steering Committee (2015-2016)

Co-Chair, U.S. CLIVAR Panel on Phenomena, Observations and Synthesis (2015-2016)

Member, U.S. CLIVAR Panel on Phenomena, Observations and Synthesis (2013-2016)

Member, U.S. GLOBEC Scientific Steering Committee (2004-2012)

Member, VAMOS Ocean-Cloud-Atmosphere-Land Study (VOCALS) Modeling Group
(2004-2006)

Member, PICES Evaluations of Climate Change Projections Working Group (2006-2010)

Member, Bering Ecosystem Study (BEST) Scientific Steering Committee (2005-2007)

Member, U.S. CLIVAR Pacific Sector Implementation Panel (2002-2005)

Member, Overview Advisory Group, GLOBEC Climate Impacts on Open Ocean Top
Predators Program (2003-2004)

Co-Organizer: Surfside Climate Workshop, SIO:

“California Current Modeling: Do Observations Corroborate the Modeled
Phenomena?” (1999)

“Climate Forcing of Oceanic Ecosystems: Are Significant Biological Feedbacks
Possible on Interdecadal Timescales?” (2001)

Co-Organizer: Climate-Culture Workshop, SIO-UCSD Department of Anthropology:

“Impacts of El Nino Climate Variability on Cultural Development in Peru and the
Andes” (2003)

Co-Organizer: NOAA-CIFAR Synthesis Workshop:

“The Climate Regime Shift Hypothesis and the Decline of the Steller Sea Lion
Population” (2003)

Co-Organizer: SIO-UCSD Department of Music Workshop:

“The Confluence of Art, Music, Science and the Environment” (2006)

Organizer: “Hendershott Symposium” Career Recognition Event (2007)

Co-Organizer: “LTER Cross-Site Regional Ocean Modeling Workshop” (2011)

Co-Organizer and Acting Workshop Chair, “GLOBEC/PICES/ICES Workshop on
Forecasting Ecosystem Indicators with Process-Based Models (ECOFOR)” (2012)

Co-Organizer, U.S. CLIVAR ENSO Ecosystem Forecasting Workshop, SIO (2016)

Steering Committee, “2014-16 Pacific Anomalies Symposia”, La Jolla (2015) and Seattle
(2016)

Co-Organizer, “AORI-SIO Joint Symposium”, La Jolla, CA, (2016)

Advising Scientist, “Weather on Steroids: The Art of Climate Change” Exhibition

Numerous invited seminars, keynote lectures, and talks at universities, research
institutions, conferences and workshops around the world

Interviewed by numerous local, national, and international newspaper, magazine, radio,
and television reporters

UNIVERSITY SERVICE:

Head of Oceans and Atmosphere Section, 2015-present
Director of CASPO, 2008-2009, 2010-2015
Associate Director of CASPO, 2007-2008, 2009-2010
Associate Director of CRD, 2000-2007

SIO Committee on Academic Personnel, 1998-2001, 2005-2008
Administrator, SIO Climate Computing Facility, 2000-2011
SIO CRD/CASPO Seminar Series Coordinator, 1998-present
Birch Aquarium/Museum Panel, 2005-06, 2007-present
SIO Staff Council nominations committee, 2001
Chair, SIO Alumni Network Leadership Team, 2006-07
SIO Heritage Committee, 2008-2015, Chair, 2015-present
SIO Committee on Committees, 2009-2011
Frieman Prize Committee, 2011
Chair, Keeling Memorial Lecture Committee, 2013-present
Chair, SIO Institutional Post-doctoral Fellowship Selection Committee, 2009, 2010
Chair, Ritter Memorial Fellowship Selection Committee, 2017, 2018
SIO Editorial and Publications Committee, 2014-present
Scripps Research and Academics Committee (*ex officio*), 2015-present
Scripps Space Management Committee (*ex officio*), 2015-present
Scripps Awards Committee (*ex officio*), 2015-present
UCSD Council of Chairs (*ex officio*), 2015-present

Supervisor to MSO Anne Footer, 2015-present (*ex officio*)
Supervisor to Director of CW3E, Dr. Marty Ralph, 2014-present (*ex officio*)
Supervisor to Programmer/Analyst Jack Ritchie, 1990-1992, 2010-present
Supervisor to Programmer/Analyst Bill Higgins, 1999-01
Supervisor to Programmer/Analyst Martin Olivera, 2001-2011
Supervisor to Assistant Project Scientist Dr. Guillermo Auad, 1999-2011
Supervisor to Assistant Project Scientist Dr Doug Neilson, 1999-2006

IRDAC "Coastal" Assistant Professor Search Committee, 1999-00
COMPAS Researcher (Triple) Search Committee, 2000-03
NHBO MSO Search Committees, 2001-2002, 2004-05
Chair, OA Section Researcher Search Committee, 2005-2006
Dynamic Meteorology and Data Assimilation (Double) Assistant Professor Search Committee, 2007-08
Physical Oceanography and Climate Assistant Professor Search Committee, 2008-09
OA Section "Unfunded Researchers" (Triple) Search Committee Chair, 2011-12

Climate Sciences Admissions Committee Member, 1996-present
SIO "Diversity Admission Committee" Member, 2016-17, 2017-18
Climate Sciences Open House, Coordinator 1999, 2004-11; Participant 2012-18
Climate Sciences Departmental Exam Committee, 1998 (Chair), 03, 06-07, 09-11, 16-17

EDUCATIONAL SERVICE:

Currently Doctoral Advisor/Co-Advisor to:

- Mr. Osinachi Ajoku, Climate Sciences, SIO (2014-present)
- Mr. Dillon Amaya, Climate Sciences, SIO (2014-present)
- Mr. Jonathan Eliashiv, Climate Sciences, SIO (2015-present)
- Ms. Tashiana Osborne, Climate Sciences, SIO (2015-present)
- Ms. Meredith Fish, Climate Sciences, SIO (2015-present)
- Ms. Daniela Faggiani Dias, Climate Sciences, SIO (2015-present)
- Ms. Nathali Cordero Quiros, Climate Sciences, SIO (2015-present)
- Mr. Momme Hell, Physical Oceanography, SIO (2016-present)

Formerly Doctoral Advisor/Co-Advisor to:

- Dr. Emanuele Di Lorenzo, Climate Sciences, SIO (Ph.D. 2003)
 - Post-doc: SIO/UCSD
 - Currently: Full Professor, Georgia Tech
- Dr. Hyodae Seo, Climate Sciences, SIO (Ph.D. 2007)
 - Post-doc: NOAA Climate and Global Change Program Postdoctoral Fellow, UCLA/University of Hawaii
 - Currently: Associate Scientist with tenure, Woods Hole Oceanographic Institution
- Dr. Hey-Jin Kim, Climate Sciences, SIO (Ph.D. 2008),
 - Post-doc: Monterey Bay Aquarium Research Institute Postdoctoral Fellow
 - Currently: Programmer/Analyst, SIO
- Dr. Hajoon Song, Climate Sciences, SIO (Ph.D. 2011)
 - Post-docs: University of California, Santa Cruz, and M.I.T.
 - Currently: Assistant Professor, Yonsei University, Korea
- Dr. Dian Putrasahan, Climate Sciences, SIO (Ph.D. 2012)
 - Post-doc: University of Miami
 - Currently: Scientist, Max-Planck-Institut für Meteorologie, Hamburg
- Dr. Aneesh Subramanian, Climate Sciences, SIO (Ph.D. 2012)
 - Post-docs: SIO/UCSD and Oxford University
 - Currently: Assistant Project Scientist, SIO
 - Pending: Assistant Professor, University of Colorado
- Dr. Linghan Li, Physical Oceanography, SIO (Ph.D. 2013)
 - Post-doc: University of Washington
- Dr. Lauren Franck, Climate Sciences, SIO (Ph.D. 2013)
 - Post-doc: NRC Fellow, Naval Research Laboratory, Washington, DC
 - Currently: Scientist, Naval Undersea Warfare Center, Newport, RI
- Dr. Nicholas Cavanaugh, Climate Sciences, SIO (Ph.D., 2014)
 - Post-doc: Lawrence Berkeley National Laboratory
 - Currently: Cumulus
- Dr. Michael DeFlorio, Climate Sciences, SIO (Ph.D. 2015)
 - Post-doc: JPL/Caltech, Pasadena, CA
 - Pending: Assistant Project Scientist, SIO

Masters Advisor to:

Ms. Chelsey Nieman, Biodiversity and Conservation, SIO (M.A.S. 2014)
Mr. Ankur Gupta, Climate Sciences, SIO (M.S. 2012)
Mr. Gino Passalacqua, Climate Sciences, SIO (M.S. 2009)

Doctoral Committee Member to:

Dr. Xiang San Liang, Applied Mathematics, Harvard University (Ph.D. 2002)
Dr. Thomas Reichler, Climate Sciences, SIO (Ph.D. 2002)
Dr. Catherine Johnson, Biological Oceanography, SIO (Ph.D. 2003)
Dr. David Field, Biological Oceanography, SIO (Ph.D. 2004)
Mr. Ehecatl Munoz-Mejia, Fisheries Ecology, CIBNOR, La Paz, Mexico, (2002-2005)
Dr. Chih-Hao Zac Hsieh, Biological Oceanography, SIO (Ph.D. 2006)
Dr. Elena Brambilla, Physical Oceanography, SIO (Ph.D. 2006)
Dr. Alex Ruane, Climate Sciences, SIO (Ph.D., 2007)
Dr. Elizabeth Douglass, Physical Oceanography, SIO (Ph.D., 2007)
Dr. Daniel Birch, Physical Oceanography, SIO (Ph.D., 2007)
Mr. Miles Woodard, Climate Sciences, SIO (M.S. 2008, pending submission of thesis)
Dr. Xue Fan, Physical Oceanography, SIO (Ph.D. 2014)
Dr. Ethan Deyle, Biological Oceanography, SIO (Ph.D., 2015)
Mr. Cotton Rockwood, Biological Oceanography, SIO (Ph.D. candidate, 2013-present)
Dr. Sara Sanchez, Climate Sciences, SIO (Ph.D., 2018)
Dr. Weijie Wang, Climate Sciences, SIO (Ph.D., 2017)
Dr. Will Crawford, Ocean Sciences, UC, Santa Cruz (Ph.D., 2017)
Ms. Adi Khen, Marine Biology, SIO (Ph.D. candidate, 2017-present)

Masters Committee Member to:

Mr. Tony Shiao, Biodiversity and Conservation, SIO (M.A.S. 2013)

Visiting Doctoral Students mentored:

Mr. Anamitra Saha, Civil Engin., Indian Institute of Technology Bombay (2016-2017)
Ms. Daling Li Yi, Phys. Oceanogr., Ocean University of China Qingdao (2016-present)
Ms. Lin Piao, Meteorology, Peking University (2016-2017)
Mr. Yu Zhang, Phys. Oceanogr., Ocean University of China Qingdao (2017-present)

External Thesis Examiner, Griffith University (2009, 2010, 2014, 2015)

Postdoctoral researchers mentored:

Dr. Guillermo Auad, Ph.D., Scripps Institution of Oceanography (1995-1999)
Dr. Sutara "Ata" Suanda, Ph.D., Oregon State University (2014-2015)
Dr. Liz Drenkard, Ph.D., MIT-Woods Hole Joint Program (2016-present)
Dr. Rui Sun, Ph.D., Virginia Tech (2017-present)

Research Experiences for Undergraduates (REU) Advisor to:

Ms. Emma Nuss, UCSD (2012-13)
Ms. Ana-Patricia Lopez, Environmental Engineering, SDSU (2013-2014)
Ms. Maria Winters, Environmental Engineering, UCSD (2015-2017)

Mr. Nathan Cusson-Nadeau, Environmental Engineering, UCSD (2016-2017)
Ms. Cristina Curiel, Marine Biology, UCSD (2017)
Ms. Sara Ramirez, Environmental Systems, UCSD (2018-present)

Summer High School Intern Advisor to:

Ms. Hannah Cohen, Horace Greeley High School, Chappaqua, NY, 2018-present

Science Olympiad Event Coach for “Compute This: Ocean-Atmosphere,”
“Oceanography” and “Remote Sensing”, University City High School (2005-2008)
National Ocean Science Bowl (NOSB) Science Judge (2013 and 2014)

Participant, "Exploring Ocean Careers Night" at Birch Aquarium (2014-2018)

Founding Member, Stay Cool for Grandkids (2013-present)

CURRENT FUNDED RESEARCH PROJECTS:

Quantifying Predictability Limits, Uncertainties, Mechanisms, and Regional Impacts of Pacific Decadal Climate Variability (NSF) 2014-2019: Use sophisticated techniques of statistical and dynamical analysis to identify predictable components of climate

Climate Change Impacts on the Sustainability of Key Fisheries of the California Current System (NSF) 2016-2019: Use regional ocean downscaling of global climate model projections of the California Current System to drive sardine, squid and lobster fisheries forecast models that include economic and social impacts

Ecological Transitions in the California Current Ecosystem: CCE-LTER Phase III (NSF) 2016-2022: Measure and model the ecology of the California Current Ecosystem using targeted cruises and data assimilation models

A Nudging and Ensemble Forecasting Approach to Identify and Correct Tropical Pacific Bias-Producing Processes in CESM (NOAA) 2014-2018: Use coupled data assimilation models to identify bias generation regions, times, and processes

Understanding and Quantifying the Predictability of Marine Ecosystem Drivers in the California Current System (NOAA) 2017-2020: Use statistical and dynamical models to identify predictable components of El Niño on the CCS physical-biological state

Data Assimilation and Diagnostics of Inner Shelf Dynamics (ONR) 2014-2018: Use nested high-resolution models to study the processes and predictability of the Inner Shelf off Point Sal, CA, in support of field observations

Prediction of Monsoon Intra-Seasonal Oscillations Using High-Resolution Coupled Modeling and Data Assimilation (ONR) 2017-2022: Use regional coupled models to identify processes of air-sea interaction affecting the monsoon in the Bay of Bengal