

CURRICULUM VITAE

Name: Oechel, Walter C.
Birthdate: 15 January 1945
Birthplace: San Diego, California
Education: B.A., San Diego State University, San Diego, California, 1966
Organization for Tropical Studies, Tropical Ecology Course, Costa Rica, Summer 1967
Duke University, Predoctoral Research, 1969-1970
Ph.D., University of California, Riverside, California, 1970

Professional Experience:

2013-date Distinguished Visiting Professor, IMBE, Aix-Marseille Univeristy, France
2013-date Professor of Biosphere Atmosphere Exchange. CEPSAR, Open University, Milton, UK
2012-date Distinguished Visiting Professor. Department of Geography, University of Leicester, Leicester. UK
2010-2012 Distinguished Visiting Research Scientist. Fondazione Edmund Mach, San Michele all'Adige (TN), Italy
2008-date Director, International Research Internship Program, San Diego State University
2007-date Distinguished Professor of Biology, San Diego State University
2006-2008 Academic Director, Field Stations Program, San Diego State University
2004-date Adjunct Professor, CICESE (Centro de Investigación Científica y de Educación Superior de Ensenada)
2001-date Adjunct Professor, CIBNOR (Centro de Investigaciones Biológicas del Noroeste)
1999-date Coordinator, Joint Doctoral Program in Ecology, San Diego State University
1999-date Science Faculty, Center for Research in Mathematics and Science Education
1993-date Director, Global Change Research Group, San Diego State University
1983-2007 Professor, Biology Department, San Diego State University
1982-1987 Director, Systems Ecology Research Group, San Diego State University
1980-1987 Director, Biological Field Stations, San Diego State University
1978-1982 Research Professor, Systems Ecology Research Group, San Diego State University
1976-1978 Visiting Research Professor, Systems Ecology Research Group, San Diego State University

1975-1978	Associate Professor, Biology Department, McGill University, Tenured 1978
1970-1975	Assistant Professor, Biology Department, McGill University
1967-1970	NDEA Fellow, Department of Life Sciences, University of California, Riverside
1967-1968	Research Assistant, Department of Life Sciences, University of California, Riverside
1967	National Science Foundation Fellowship to attend Organization for Tropical Studies Summer Tropical Ecology Course, Costa Rica
1966-1967	Graduate Teaching Assistant, Department of Life Sciences, University of California, Riverside

Expert Reviewer, Expert Testimony:

12/6-9/1994	Expert Reviewer. Dutch National Research Programme on Global Air Pollution and Climate Change, Maastricht, The Netherlands
12/7-10/1993	Expert Consultant. Italian Parliament, Global Climatic Change and Agricultural Production: Direct Effects on Hydrological and Plant Physiological Processes. Food and Agriculture Organization of the United Nations Organization (FAO, UNESCO, UN). Rome, Italy.
3/29/1993	Expert Testimony. Entique Committee Hearing on CO ₂ Fertilizer Effect. Bonn, Germany.
8/17-20/1992	Expert Reviewer. Dutch National Research Programme on Global Air Pollution and Climate Change. Appledorn, The Netherlands.
4/6/1992	Expert Testimony. To the U.S. Senate at the request of then Senator Gore, Senate Transportation and Commerce Subcommittee Hearing on Global Change Research: Global Warming and the Biosphere. Washington, D.C.

Awards/Recognition:

2014	Thomas Reuters: "Most Influential Scientific Minds-2014"
Continuing	Institute for Scientific Information's "Highly Cited Researcher"
2008	SDSU Provost Recognition.
2007	Albert Johnson Lecture. Distinguished Professor of Biology, San Diego State University.
2005	National Science Foundation, Director's Award for Distinguished Teaching and Scholarship (one of eight nationally).
2005	SDSU Alumni Monty Award.
2003	Excellence in University Science Education. San Diego Science Educators Association.
2002	Best Practices in Education. Best Practices Showcase.
1995	Oosting Award Lecturer. Duke University.

Selected Research Experience and Funding:

- 2011-2015 Co-PI (SDSU Principal Investigator). Carbon in Arctic Reservoirs Vulnerability Experiment. NASA. (JPL Subcontract to SDSU \$1,100,000).
- 2012-2015 Co-PI (SDSU Principal Investigator). Methane loss from the Arctic: towards an annual budget of CH₄ emissions from tundra ecosystem across a latitudinal gradient. National Science Foundation, Office of Polar Program. \$995,619.
- 2010-2013 Principal Investigator. Seasonal and Inter-annual Controls on CO₂ Flux in Arctic Alaska. U.S. Department of Energy. \$375,000.
- 2009-2010 Co-Principal Investigator. Principal Investigator: Asfaw Beyene, San Diego State University. Energy, Water, and Global Change as a Regional Agenda of the Americas, Pan-American Advanced Studies Institute. National Science Foundation, Office of International Science and Engineering. September 15, 2009-August 31, 2010. \$100,000.
- 2007-2010 Principal Investigator. Senior Scientist Support in Barrow, Alaska. National Science Foundation, Office of Polar Programs. September 25, 2007-September 1, 2010. \$187,613.
- 2007-2010 Principal Investigator. Controls on Carbon and Methane Flux Across a Complex Coastal Arctic Landscape. U.S. Department of Energy, National Institute for Climatic Change Research. July 1, 2007-June 30, 2010. \$324,932.
- 2004-2010 Principal Investigator. Biocomplexity Associated with the Response of Tundra Carbon Balance to Warming and Drying across Multiple Spatial and Temporal Scales. National Science Foundation, Environmental Research and Education. September 1, 2004-August 31, 2010. \$2,263,373.
- 2004-2008 Principal Investigator. Sharing the Message of Global Change through Multimedia, Vertically Integrated Outreach Curriculum. National Science Foundation, Director's Award for Distinguished Teaching and Research. May 15, 2004-April 30, 2008. \$305,000.
- 2005-2008 Principal Investigator. Developing an Understanding and Predictive Capability of the Interconnections among Arctic Terrestrial, Atmospheric, and Marine Systems. National Science Foundation, Office of Polar Programs. January 1, 2005-December 31, 2008. \$1,600,000.
- 2005-2007 Principal Investigator. Pan-American Studies Institute. National Science Foundation, Directorate for Biological Sciences. September 15, 2005-August 31, 2008. \$100,000.
- 2004-2008 Principal Investigator. Regional Assessment of Arctic Vegetation Productivity and Soil Respiration Environmental controls Using MODIS and AMSR-E: A New Approach for Satellite Monitoring of Pan-Arctic Terrestrial Net CO₂ exchange. Sub-contract, University of Montana. National Aeronautics and Space Administration. May 15, 2004-May 14, 2008. \$240,000.
- 2001-2006 Principal Investigator. Long Term Patterns of and Controls on Inter- and Intra-annual Variability in CO₂ Flux in the Alaskan Arctic. National Science Foundation, Office of Polar Programs. September 1, 2001-August 31, 2006. \$763,225.
- 2002-2006 Principal Investigator. PISCES (Partnerships Involving the Scientific Community in Elementary Schools). National Science Foundation, Graduate Teaching Fellowships in K-12 Education. September 1, 2002-August 31, 2006. \$1,657,500.

2005-2006 Principal Investigator. A Scientific Approach to Global Awareness in K-6 Classrooms Longview Foundation. June 1, 2005-May 31, 2006. \$10,000.

2004-2006 Principal Investigator. Lateral Carbon Flux in a Chaparral Ecosystem and Its Effects on Carbon budget estimates. The San Diego Foundation, Blasker-Rose Miah. July 1, 2004-June 30, 2005. \$73,690.

2003-2006 Principal Investigator. Spectroscopic Instrumentation for San Diego State University Ecology. National Science Foundation, Division of Biological Infrastructure. May 1, 2003-April 30, 2006. \$194,173.

2003-2006 Principal Investigator. Rapid Research Response to Determine the Impact of a Natural, Hot Wildfire at the Sky Oaks Biological Field Station on the Horizontal and Vertical Fluxes of Carbon. National Science Foundation, Small Grants for Exploratory Research. October 1, 2003-January 31, 2006. \$100,000.

2004-2005 Principal Investigator. Biocomplexity Supplement. National Science Foundation, Office of Polar Programs. June 15, 2004-September 15, 2005. \$136,588.

2004-2005 Principal Investigator. Spectroscopic Instrumentation for San Diego State University Ecology Programs. California State University Program for Education and Research in Biotechnology. July 1, 2004-June 30, 2005. \$25,000.

2002-2005 Principal Investigator. Understanding and Determining the Patterns and Controls of Regional Net Ecosystem Production in the Great Plains and Midwestern Regions: A Proof of Concept. National Institute for Global Environmental Change, Midwest/Great Plains. July 1, 2002-August 31, 2005. \$536,708.

2002-2005 Principal Investigator. PISCES Resource Center Support. San Diego Science Alliance. October 1, 2002-September 30, 2005. \$31,600.

2000-2005 Principal Investigator. Current and future patterns of vegetation and ecosystem function in the regions of San Diego and La Paz, Baja California. National Science Foundation, International Programs. June 1, 2000-August 31, 2005. \$78,289.

1998-2004 Principal Investigator. Regional Variability in Carbon and Fluxes: Towards a Global Synthesis. National Science Foundation, Land Atmosphere Ice Interactions, Arctic System Science. May 1, 1998-April 31, 2004. \$2,955,191.

2003-2004 Principal Investigator. Educational Program for Atmospheric Science Education in the San Diego/Tijuana/Ensenada Border Region. Consortium for North American Higher Education Collaboration. July 1, 2003-June 30, 2004. \$15,000.

2002 Principal Investigator. Interaction of the Pacific Atmosphere-Ocean System on Circum-Pacific Carbon Balance. International Arctic Research Consortium. July 1-December 31, 2002. \$69,993.

2001-2004 Co-Principal Investigator. Principal Investigator: Kathy Williams, San Diego State University. Undergraduate Mentoring in Environmental Biology. National Science Foundation. June 1, 2000-August 31, 2004. \$305,965.

2001-2004 Principal Investigator. Long Term Patterns of and Controls on Inter- and Intra-annual Variability in CO₂ Flux in the Alaskan Arctic. National Science Foundation, Office of Polar Programs. September 1, 2001-August 31, 2004. \$573,225.

2001-2002 Principal Investigator. Extrapolation of leaf and stand level CO₂ and H₂O flux measurements to the regional level in a Mediterranean Ecosystem under current and elevated CO₂ concentrations. Western Regional Center of the National Institute for Global Environmental Change. July 1, 2001-June 30, 2002. \$80,000.

2000-2003 Principal Investigator. Construction of Mobile Flux Platform. Institute of Agrometeorology and Environmental Analysis. July 1, 2000-June 30, 2003. \$130,000.

2000-2002 Co-Principal Investigator. Principal Investigator: W. Timothy Hushen, SDSU. Feedbacks on Global Change from Arctic Terrestrial Ecosystems. International Arctic Science Committee. April 18, 2000-April 30, 2002. \$85,000.

2000-2002 Co-Principal Investigator. Principal Investigator: Kathy Williams, SDSU. Enhancement of Undergraduate Biology Curriculum Instruction in Ecology and Global Change. National Science Foundation, The Course, Curriculum, and Laboratory Improvement Program. January 1, 2000-December 31, 2002. \$79,839.

1999-2003 Principal Investigator. GK-12: K-6 Science Corps Fellow for the San Diego PISCES Project. National Science Foundation, Graduate Teaching Fellows in K-12 Education. September 1, 1999-August 31, 2003. \$1,511,522.

2000-2001 Co-Principal Investigator. Principal Investigator: Kathy Williams, SDSU. FSML: Data Management and Communication Enhancement at San Diego State University Field Stations. National Science Foundation, Improvements in Facilities, Communications, and Equipment at Biological Field Stations and Marine Laboratories. October 1, 2000-September 30, 2001. \$39,130.

2000-2001 Principal Investigator. Mobile Flux Platform Training. Lund University. December 1, 2000-November 30, 2001. \$30,000.

2000-2001 Principal Investigator. Coastal Sage Restoration Project. Synagro West, Inc. September 1, 2000-August 30, 2001. \$10,000.

1997-2001 Principal Investigator. Acquisition of a Very-light Aircraft and Ground-based Tower Eddy Correlation System for Measurement and Prediction of Ecosystem CO₂ Flux. National Science Foundation, Biological Infrastructure. April 1, 1997-March 31, 2001. \$239,300.

1997-2001 Principal Investigator. Patterns and Controls of Temporal Variation in CO₂ Sequestration and Loss from Arctic Ecosystems. National Science Foundation, The Joint Program on Terrestrial Ecology and Global Change Notice 97-02. October 1, 1997-September 30, 2001. \$942,619.

1997-2001 Principal Investigator. A new CO₂ resource and facility for determination of the effects of atmospheric CO₂ on native *Pinus Jeffreyi* forests using geothermal sources of CO₂. National Science Foundation, Small Grants for Exploratory Research. October 1, 1997-September 31, 2001. \$86,244.

1997-2000 Principal Investigator. Development and Testing of a Free-Air CO₂ Enrichment Facility for Use in Arid and Semi-arid Ecosystems. Western Regional Center of the National Institute for Global Environmental Change. July 1, 1997-June 30, 2000. \$376,429.

1997-1998 Principal Investigator. Fellowship: Using remote sensing and natural CO₂. National Aeronautics and Space Administration. September 1, 1997-August 31, 1998. \$22,000.

- 1997 Principal Investigator. Effects of Global Change on Mediterranean-type ecosystems. Southern California Edison. Sept. 1 1997- December 31, 1997. \$119,000.
- 1997 Principal Investigator. GLOBE Workshop. National Aeronautics and Space Administration. July 1997. \$20,000.
- 1996-1999 Principal Investigator. Response of Mediterranean-type Ecosystems to Elevated Atmospheric CO₂ and Associated Climate Change. U.S. Department of Energy, Program for Ecosystem Research. September 1, 1996-August 31, 1999. \$600,000.
- 1996-1998 Principal Investigator. Using natural CO₂ springs to understand the long-term effects of elevated CO₂ on ecophysiology and distribution patterns of evergreen and deciduous tree species. National Aeronautics and Space Administration Fellowship. August 1, 1996-July 31, 1998. \$10,000.
- 1996-1998 Principal Investigator. Long-term natural CO₂ enrichment of a Mediterranean mixed-oak forest: seasonal variation in plant-soil nutrient dynamics and carbon sink strength. National Science Foundation, Division of International Programs. July 15, 1996-June 30, 1998. \$10,000.
- 1995-1998 Principal Investigator. Acquisition of a free air CO₂ enrichment (FACE) facility. National Science Foundation. September 15, 1995-August 31, 1998. \$258,000.
- 1995-1998 Principal Investigator. Fellowship: Using remote sensing and natural CO₂. National Aeronautics and Space Administration. September 1, 1995-August 31, 1998. \$44,000.
- 1994-1998 Principal Investigator. Carbon flux in Arctic landscapes. National Science Foundation, Office of Polar Programs. June 1, 1994-December 31, 1998. \$972,464.
- 1994-1998 Principal Investigator. Off-campus work regional estimates of carbon flux. National Science Foundation, Office of Polar Programs. June 1, 1994-December 31, 1998. \$1,345,228.
- 1994-1997 Principal Investigator. Large area estimates of carbon fluxes in arctic landscapes. NSF, ARCSS LAII. June 1, 1994-December 31, 1997. \$1,858,221.
- 1993-1994 Principal Investigator. Response of a Tundra Ecosystem to Elevated Atmospheric CO₂. U.S. Department of Energy, CO₂ Project. September 1, 1993-August 31, 1994. \$300,000.
- 1993-1996 Principal Investigator. Response of Mediterranean-type Ecosystems to Elevated Atmospheric CO₂ and Associated Climate Change. U.S. Department of Energy, Chaparral Project. September 1, 1993-August 31, 1995. \$1,200,000.
- 1993-1994 Principal Investigator. Net Ecosystem Carbon Flux of Age-specific Sub-Arctic Tussock Tundra Stands Following Fire: Implications for Alaska Interagency Fire Management. U.S. Department of the Interior, Interior Fire Coordinating Committee. October 1, 1993-September 30, 1994. \$750,000.
- 1993-1994 Principal Investigator. Effects of Global Climate and Atmospheric Change on the Structure and Function of Mediterranean Shrub Ecosystems and Associated Forest Ecotones in California. Southern California Edison. April 1, 1993-March 31, 1994. \$63,300.
- 1992-1994 Principal Investigator. Effects of global climate and atmospheric change on the structure and function of Mediterranean shrub ecosystems and associated forest ecotones in

California. Western Regional Center of the National Institute for Global Environmental Change. September 1, 1992-June 30, 1994. \$78,650.

1992-1993 Principal Investigator. Effects of global climate and atmospheric change on the structure and function of Mediterranean shrub ecosystems and associated forest ecotones in California. Southern California Edison. April 1, 1992-March 31, 1993. \$48,640.

1992-1993 Principal Investigator. Net ecosystem carbon flux of age-specific sub-Arctic tussock tundra stands following fire: implications for Alaska interagency fire management. U.S. Department of the Interior, National Parks Program. July 6, 1992-April 30, 1993. \$278,755.

1992-1993 Principal Investigator. Large area estimates of carbon fluxes in arctic landscapes. National Science Foundation, ARCSS LAII. September 1, 1992-August 31, 1993. \$340,101.

1989-1993 Principal Investigator. Response to a tundra ecosystem to elevated atmospheric carbon dioxide and CO₂-induced climate change. U.S. Department of Energy, CO₂ Project. \$400,000.

1985-1988 Principal Investigator. Mechanisms controlling resource use, community organization, and succession in fire dominated chaparral ecosystems. National Science Foundation, Ecosystems Studies Program. \$900,000.

1984-1988 Principal Investigator, Principal Scientist. Effect of perturbation of tundra drainage systems on ecosystem dynamics of tundra and riparian vegetation. U.S. Department of Energy, R4D Program. \$3,000,000.

1984-1988 Principal Investigator. The response of arctic ecosystems to elevated carbon dioxide regimes. U.S. Department of Energy, CO₂ Project. \$1,200,000.

1982-1984 Principal Investigator. Potential responses of tundra ecosystems to perturbations from energy development. U.S. Department of Energy, Environment and Health. \$700,000.

1982-1984 Principal Investigator. Response of arctic ecosystems to elevated CO₂ regimes. U.S. Department of Energy. \$600,000.

1982-1984 Principal Investigator. Mechanisms controlling resource use, community organization, and succession in fire-dominated chaparral ecosystems. National Science Foundation, Ecosystems Studies Program.

1982-1983 Principal Investigator. Controls on growth and carbon balance of resprouts and seedlings following fire and harvesting for biomass. USDA Forest Service. \$75,000.

1982-1983 Principal Investigator. A proposal for cooperative research in Mediterranean-type ecosystems.

1981-1982 Principal Investigator. Primary production and stand development in chaparral communities at the San Dimas Biosphere Reserve. USDA Forest Service. \$85,000.

1981-1982 Principal Investigator. Development of a guide to the vegetation communities along a transect from the Pacific Coast to the Anza Borrego Desert State Park. USDA Forest Service. \$85,000.

1981-1982 Principal Investigator. Patterns and control of carbon assimilation in chaparral and associated ecosystems. USDA Forest Service. \$105,000.

1981-1982 Co-Principal Investigator. Principal Investigator: Paul Zedler. International symposium on dynamics and management of Mediterranean-type ecosystems. National Science Foundation. \$125,000.

1981-1982 Co-Principal Investigator. Principal Investigator: Paul Zedler. International symposium on dynamics and management of Mediterranean-type ecosystems. UNESCO-MAB.

1979-1980 Principal Investigator. Controls on growth and photosynthesis in chaparral regrowth following fire. USDA Forest Service

1978-1980 Co-Principal Investigator. Principal Investigator: K. Van Cleve. The structure and function of a black spruce (*Picea mariana* [Mill] B.S.P.) forest in relation to other fire affected taiga ecosystems. National Science Foundation. \$1,250,000

1977-1981 Co-Principal Investigator. Principal Investigator: P.C. Miller. Community organization and resource utilization by vegetation in convergent ecosystems. National Science Foundation. \$750,000.

1977-1982 Co-Principal Investigator. Principal Investigator: P.C. Miller. Research on dynamics of tundra ecosystems and their potential response to energy resource development. U.S. Department of Energy. \$875,000.

1977-1978 Principal Investigator. Travel Grant. National Research Council, Canada. \$45,000.

1977-1978 Principal Investigator. Capital Equipment Grant for Growth Chambers. National Research Council, Canada. \$135,000.

1974-1978 Principal Investigator. Factors controlling the evolution and selection of the photosynthetic response patterns in boreal plants. National Research Council, Canada. \$375,000.

1974-1978 Principal Investigator. Systems analysis of production and nutrient cycling in a subarctic open lichen woodland. FCAC, Quebec Ministry of Education, Canada. Four annual grants. \$500,000.

1974-1975 Principal Investigator. Capital Equipment Grant for a Data Acquisition System. National Research Council, Canada. \$350,000.

1973-1974 Principal Investigator. Factors controlling photosynthesis in arctic and subarctic bryophytes. National Research Council, Canada. \$75,000.

1972-1973 Principal Investigator. The ecology and productivity of subarctic plants. National Research Council, Canada. \$65,000.

1971-1978 Principal Investigator. Northern biology project. Canadian Department of Indian Affairs and Northern Development. Seven annual grants. \$525,000.

1971-1977 Principal Investigator. The ecology and productivity of subarctic mosses and lichens. FCAC, Quebec Ministry of Education, Canada. Six annual grants. \$390,000.

1971-1973 Principal Investigator. The ecology and productivity of subarctic plants. National Research Council, Canada. \$130,000.

Other Professional Activities:

Selected Recent Site Reviews, Panels, and *ad hoc* Reviews

Annually	Reviewed over 40 proposals for various national and international research organizations.
Annually	Reviewed over 20 manuscripts for national and international journals including: <i>Nature</i> , <i>Science</i> , <i>Global Change Biology</i> , <i>Ecology</i> , and <i>Journal of Geophysical Research-Atmospheres</i> .
Annually	Reviewed over 6 external personnel evaluations for national and international academic institutions, foundations, and research organizations.
2011	Panel Member. Young Investigator's Award. US Department of Energy.
2010	Site Review. Lawrence Berkeley Labs. US Department of Energy
2010	Reverse Site Visit. Review Panel. National Science Foundation's Partnerships for International Research and Education (PIRE) awards. February 8-9, 2010. Arlington, VA.
2009	Review Panel. National Science Foundation, Data Interoperability Networks (INTEROP). November 30-December 1, 2009
2009	Site Review. US Department of Energy. Prudhoe Bay, AK. August 29-September 3, 2009.
2009	Science Advisory Board Review. International Arctic Research Center Science. University of Alaska, Fairbanks, Alaska. March 3-4, 2009.
2009	Review Panel NASA Panel. Carbon Cycle and Ecosystems Fellowship. Washington, D.C.
2007	Review Panel. National Science Foundation, Partnerships for International Research and Education (PIRE).
2007	Science Advisory Board Review. International Arctic Research Center Science. University of Alaska, Fairbanks, Alaska
2007	Review Panel. National Science Foundation, Partnerships for International Research and Education.
2006	Review Panel. U.S. Department of Energy, Free-Air: CO ₂ Enrichment (FACE).
2005	Review Panel. National Science Foundation Post Doctoral Program, Office of Polar Programs.
2005	Review Panel. National Science Foundation, Distinguished Teaching Scholars.
2004	Review Panel. National Science Foundation Post Doctoral Program, Office of Polar Programs.
2004	Site Review Panel. U.S. Department of Energy.
2002	Review Panel. National Science Foundation International Fellows Program.
2002	Review Panel. National Science Foundation Biocomplexity Program.

Selected Recent Committee and Board Memberships

2009-date	Board Member, Pelicano, GK-12 Education Program, CICESE Ensenada, Mexico
2007-date	Member, Science Advisory Board, International Arctic Research Center, University of Alaska, Fairbanks
1996-2009	Board Member, San Diego Science Alliance
2006-2008	Board Member, The Science Exchange
2000-2007	Member, Science Advisory Committee, Barrow Arctic Science Consortium
2003-2006	Senator, San Diego State University Faculty Senate
2002-2006	Member, Scientific Ad Hoc Advisory Committee for Greenhouse Gas Reduction, City of San Diego Initiative
1999-2005	U.S. Representative, International Arctic Science Committee
1992-2005	San Diego State University Coordinator, U.S. Department of Energy Graduate Fellowships for Global Change
1999-2003	Member, National Global Carbon Cycle Steering Committee, National Oceanic and Atmospheric Administration
1999-2003	Co-Chair, Science Advisory Committee, International Arctic Research Center
1999-2002	U.S. Representative, Feedbacks from Arctic Terrestrial Ecosystems Committee
1997-2001	Member, Ecosystem Panel on Global Change, National Research Council, National Academy of Sciences
1998-1999	Coordinator, Ecology Program Area, San Diego State University
1995-1998	Board Member, Polar Research Board, National Academy of Sciences
1994-1998	Member, CO ₂ Technical Oversight Committee, City of Chula Vista
1993-1998	Science Steering Committee, Arctic System Science Program, Land/Atmospheric/Ice Interactions, National Science Foundation
1994-1997	Secretary, International Society of Mediterranean Ecologists, International Council for Science
1993-1995	Board of Directors, Arctic Research Consortium of the United States

Editorial Boards

1999-2008	Editorial Board Member, Journal of Mediterranean Ecology
1987-1997	Editorial Review Board Member, Tree Physiology
1989-1997	Editorial Board Member, Ecologia Mediterranea

1993-1995

Editorial Board Member, ECOSCIENCE

Professional Memberships

American Association for the Advancement of Science (AAAS)

American Geophysical Union (AGU)

Ecological Society of America (ESA)

Publications (of more than 240 peer reviewed papers; H-index is 55, ISI-Web of Science; ISI Highly Cited Author and Thomas Reuters selectee as one of the “Most Influential Scientific Minds-2014”:

Dr. Oechel's over all H index is 55. His papers have been cited over 12,500 times with an average citation of 64 per paper. In the last 10 years, Prof. Oechel published in **86** papers in peer-reviewed international journals, of which most were in high impact journals (IF>3.) including: *Global Change Biology* (12), *Agricultural and Forest Meteorology* (4), *Climatic Change* (1), *Global Biogeochemical Cycles* (3), *Ecosystems* (1), *Environmental Microbiology* (1), *Global Biogeochemical Cycling* (2), *Science* (1) *Nature Geoscience* (1). The most cited paper by Prof. Oechel has been cited 1157 times.

Publications:

Journal Articles

Ikawa, H and **W.C. Oechel**. Spatial and temporal variability of air-sea CO₂ exchange of alongshore waters in summer near Barrow, Alaska. *Coastal and Shelf Science* Volume: 141 Pages: 37-46 Published: MAR 20 2014

Oechel, W. C., C. A. Laskowski, G. Burba, B. Gioli, A. A. M. Kalhori. 2014. Annual patterns and budget of CO₂ flux in an Arctic tussock tundra ecosystem. *Journal of Geophysical Research: Biogeosciences*, 119, doi: 10.1002/2013JG002431.

Watts, J. D., **W. C. Oechel**., 2014. A satellite data driven biophysical modeling approach for estimating northern peatland and tundra CO₂ and CH₄ fluxes. *Biogeosciences*.

Fisher, J. B., M. Sikka., **W. C. Oechel**., ... and C.E. Miller. 2014. Carbon cycle uncertainty in the Alaskan Arctic. *Biogeosciences Discuss*, 11, 2887-2932. doi: 10.5194/bgd-11-2887-2014.

Zulueta, R., **W. C. Oechel**, J. G. Verfaillie, S. J. Hastings, B. Gioli, W.T. Lawrence, and K.T. Paw U. 2013. Aircraft Regional-Scale Flux Measurements over Complex Landscapes of Mangroves, Desert and Marine Ecosystems of Magdalena Bay, Mexico. *Journal of Atmospheric and Oceanic Technology*, 30 (7). 1266-1294.

Vargas, R., Yépez, E., Andrade, J.L., Ángeles, G., Arredondo, T., Castellanos, A., Delgado, Josué, G, Jaime, González del Castillo, E., **Oechel, W.**, Sánchez-Azofeifa, A., Velasco, E., Vivoni, E., Watts, C. (2013). Progress and opportunities for monitoring greenhouse gases fluxes in Mexican ecosystems: the MexFlux network. *Atmósfera* (2013) volume: 26 issue: 3 page: 325-336

Sturtevant, C. S. and **W.C. Oechel**. 2013. Spatial variation in landscape-level CO₂ and CH₄ fluxes from Arctic costal tundra: Influence from vegetation, wetness and the thaw lake cycle. *Global Change Biology*, 19 (9). 2853-2866.

Zona, D., D.A. Lipson, K.T. Paw U, S.F. Oberbauer, P. Olivas, B. Gioli, **W.C. Oechel**. 2012. Increased CO₂ loss from vegetated drained lake tundra ecosystems due to flooding. *Global Biogeochemical Cycles*, 26, GB2004, doi: 10.1029/2011GB004037.

Schwalm, C.R., C.A. Williams, K. Schaefer, D. Baldocchi, T.A. Black, A.H. Goldstein, B.E. Law, **W.C. Oechel**, K.T. Paw U and R.L. Scott. 2012. Reduction in carbon uptake during turn of the century drought in western North America. *Nature Geoscience*, 5, 551-556. doi: 10.1038/ngeo1529.

Sturtevant, C.S., **W. C. Oechel**, D. Zona, Y. Kim, and C. E. Emerson. 2012. Soil moisture control over autumn

- season methane flux, Arctic Coastal Plain of Alaska. *Biogeosciences*, 9, 1423–1440, doi: 10.5194/bg-9-1423.
- Resco de Dios, V., Goulden, M., Ogle, K., Richardson, A D., Hollinger, D Y., Davidson, E A., Alday, J G., Barron-Gafford, G A., Carrara, A., Kowalski, A S., **Oechel, W C.**, Reverter, B R., Scott, R L., Varner, R K., Diaz-Sierra, R and Moreno, J M. 2012. Endogenous circadian regulation of carbon dioxide exchange in terrestrial ecosystems. *Global Change Biology*. 18(6): 1956-1970. Doi 10.1111/j.1365-2486.2012.02664.x
- Lipson, D. A.; Zona, D.; Raab, T. K.; Bozzolo, F.; Mauritz, M.; **Oechel, W. C.** 2012. Water-table height and microtopography control biogeochemical cycling in an Arctic coastal tundra ecosystem. *Biogeosciences* 9(1): 577-591.
- Niu, Shuli; Luo, Yiqi, ... **Oechel, W.C.**, ... Zhou, X. 2012. Thermal optimality of net ecosystem exchange of carbon dioxide and underlying mechanisms. *New Phytologist*. 194 (3): 775-783. doi 10.1111/j.1469-8137.2012.04095.x
- Zulueta, R.****, **W.C. Oechel**, H.W. Loescher, W.T. Lawrence, and K.T. Paw U. 2011. Aircraft-derived regional scale CO₂ fluxes from vegetated drained thaw-lake basins and interstitial tundra on the Arctic Coastal Plain of Alaska. *Global Change Biology*, doi: 10.1111/j.1365-2486.2011.02433.x
- Ikawa, H**** and **W.C. Oechel**. 2011. Air-sea CO₂ exchange of beach and near-coastal waters of the Chukchi Sea near Barrow, Alaska. *Continental Shelf Research*.
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Books and Reports:

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Recent Published Abstracts:

- Oechel, W. C.**, Moreaux, V., A.M. Kalhori, A., Losacco, S., Murphy, P., Wilkman, E and Zona, D. **2014**. Large scale, regional, CH₄ and net CO₂ fluxes using nested chamber, tower, aircraft flux, remote sensing and modeling approaches in Arctic Alaska. EGU General Assembly. Abstract# EGU2014-5320.
- Kalhori, A., Burba, G., Gioli, B., **Oechel, W.C.** 2013. Annual patterns and budget of CO₂ flux in arctic tussock tundra ecosystem at Atkasuk, Alaska. EOS Tans. AGU Fall Meeting. Suppl., Abstract # GC23B-0927, San Francisco, USA.
- Moreaux, V., **Oechel, W. C.**, Losacco, S., Mcewing, R., Murphy, P and Zona, D. 2013. CH₄ fluxes along a latitudinal transect in Northern Alaska using eddy covariance technique in challenging conditions. EOS Trans. AGU Fall Meeting. Suppl., Abstract # B11H-06, San Francisco, USA.
- Murphy, P., **Oechel, W.C.**, Moreaux, V., Losacco, S., Zona, D. 2013. Expanding Spatial and Temporal Coverage of Arctic CH₄ and CO₂ fluxes, EOS Trans. AGU, Fall Meeting. Suppl., Abstract # B51E-0337.
- Wilkman, E., Oechel, W.C., Zona, D. 2013. Chamber and diffusive based carbon flux measurements and design protocols in an Alaskan Arctic ecosystem. EOS Tans. AGU Fall Meeting. Suppl., Abstract # B33K-0619, San Francisco, USA.

- Rossi, A., Oechel, W. C., Murphy, P. 2013. Quantification of lateral carbon flux in a chaparral ecosystem in Southern California. EOS Tans. AGU Fall Meeting. Suppl., Abstract # GC23B-0931, San Francisco, USA.
- Zona, D., Mission, L. and Oechel, W.C. Co-Convener with EGU General Assembly. "Understanding the impacts of hydrological changes on terrestrial ecosystems: new results from large-scale water manipulation experiments across different biomes." Vienna, Austria May 2-7, 2010.
- Oechel, W. Zona, D, et al. (2010). Long-term fluxes in the Arctic: a 10 year record. EGU. Vienna, Austria April 2010.
- Cove, S., Oechel, W. (2010). Fall Methane Fluxes in the Arctic. EGU. Vienna, Austria April 2010.
- Anderson, T., G.G. Burba, A. Komissarov, D.K. McDermitt, L. Xu, D. Zona, W.C. Oechel, J.L. Schedlbauer, S.F. Oberbauer, B. Riensche, and D. Allyn. (2009). Low-Power Solution For Eddy Covariance Measurements Of Methane Flux. American Geophysical Union Fall Meeting 2009.
- Olivas, P., S.F. Oberbauer, C.E. Tweedie, and W.C. Oechel. (2009). Arctic ecosystem responses to changes in water table and surface warming. American Geophysical Union Fall Meeting 2009.
- Oechel, W.C., S. Hastings, H. Ikawa, H. Kwon, C. Laskowski, J. Verfaillie, D. Zona, and R. Zulueta. (2009). Long-term observations of trace gas fluxes in the Arctic. Ecological Society of America Annual Meeting 2009.
- Zona, D., W.C. Oechel, S. Oberbauer, P. Olivas, C. Tweedie, L. Hinzman, A. Liljedahl, and D. Lipson. (2009). The consequence of the change in hydrology on CO₂ fluxes in the Arctic tundra: Results from the first large-scale water table manipulation experiment in the Alaskan Arctic tundra. Ecological Society of America Annual Meeting 2009.
- Zona, D., W.C. Oechel, and K. M. Peterson. (2008). Carbon fluxes across vegetated drained lakes of different ages on the Arctic Coastal Plain, Alaska. American Geophysical Union Fall Meeting 2008.
- Liljedahl, A., L. Hinzman, Y. Harazono, D. Zona, and W.C. Oechel. (2008). Arctic Summer Surface Energy Balance at Two Coastal Drained Lake Basins, Barrow, Alaska. American Geophysical Union Fall Meeting 2008.
- Zona, D. and W.C. Oechel (2008). The Biocomplexity Manipulation Experiment: Effect of Water Table Drop on CH₄ and CO₂ Fluxes in the Alaskan Arctic at The Barrow Environmental Observatory. Ninth International Conference on Permafrost (NICOP).
- Oechel, W.C. and D. Zona. (2008). Continuous Measurements of Methane Fluxes by Eddy Covariance in the Arctic: Results of a large scale manipulation of water status at Barrow Alaska. Workshop on "Vulnerability and Opportunity of Methane Hydrates."
- Zona, D., W.C. Oechel, G. Burba, H. Ikawa, and C. Sturtevant. (2008). Methane emission in the Arctic Coastal Plain, Alaska. AMS's 28th Conference on Agricultural and Forest Meteorology.
- Zona, D. and W.C. Oechel. (2008). Continuous measurements of methane fluxes by eddy covariance in the Arctic: Results of a large-scale manipulation of water status at Barrow, Alaska. European Geosciences Union General Assembly 2008.
- Zona, D., W.C. Oechel, and S. Hastings. (2007). The carbon fluxes in a drained lake in Barrow, Alaska. Carbon in Peatlands Conference 2007.
- Zona, D., W.C. Oechel, J. Kochendorfer, A.N. Salyuk, S. Hastings, K. Paw U., and Y. Harazono. (2007). CH₄ AND CO₂ Fluxes From The Arctic Tundra during the Biocomplexity Manipulation Experiment. American Geophysical Union Fall Meeting 2007.

- Ikawa, H., W.C. Oechel, and S. Hastings. (2007). Spatial Variability of Land-Sea Carbon Exchange at a Coastal Area in Barrow, Alaska. American Geophysical Union Fall Meeting 2007.
- Laskowski, C.A. and W.C. Oechel. (2007). Extreme drought and temperature conditions lead to variable response in Arctic tundra carbon flux. American Geophysical Union Fall Meeting 2007.
- Tang, Y. and W.C. Oechel. (2007). Variation of Ecosystem Respiration with Different Vegetations at Different Microtopographies. American Geophysical Union Fall Meeting 2007.
- von Fisher, J.C., G. Ames, R. Rhew, and W.C. Oechel. (2007). Methane emission rates from the Arctic coastal tundra at Barrow: temporal and special variability and response to an experimental carbon addition. American Geophysical Union Fall Meeting 2007.
- Zona, D., W.C. Oechel, S. Hastings, S. Oberbauer, I. Kopetz, and H. Ikawa. (2006). The Contribution of Mosses to the Complex Pattern of Diurnal and Seasonal Metabolism in the Wet Coastal Tundra Ecosystems Near Barrow Alaska. American Geophysical Union Fall Meeting 2006.

Invited presentations, participation, seminars (Last 5 years):

- Zona, D., Mission, L. and Oechel, W.C. Co-Convener with EGU General Assembly. "Understanding the impacts of hydrological changes on terrestrial ecosystems: new results from large-scale water manipulation experiments across different biomes." Vienna, Austria May 2-7, 2010.
- Oechel, W. Zona, D, et al. (2010). Long-term fluxes in the Arctic: a 10 year record. EGU. Vienna, Austria April 2010.
- Cove, S., Oechel, W. (2010). Fall Methane Fluxes in the Arctic. EGU. Vienna, Austria April 2010.
- Oechel, W. Zona, D., Zulueta, R., Laskowski, C. Hetrogeneity in landscape trace gas fluxes. University of Sassari. June, 2010. Sassari, Sardinia, Italy.
- Oechel, W., Oechel, W. Zona, D., Zulueta, R., Laskowski, C. Hetrogeneity in landscape trace gas fluxes. University of Udine. November, 2010. Udine, Italy.
- Oechel, W.C. Invited Presenter. San Diego Natural History Museum. "Earth 2100." San Diego, CA. January 21, 2010.
- Oechel, W.C. Invited Presenter. AGU Annual Meeting. San Francisco, CA. December 14-18, 2009.
- Oechel, W.C. Invited Participant. Mangrove Meeting, Expert Workshop. Danone Nature Fund. Gland, Switzerland November 8-10, 2009.
- Oechel, W.C. Invited Participant. 2nd International Symposium on Peatlands in the Global Carbon Cycle. Prague, Czech Republic. September 25-30, 2009.
- Oechel, W.C. Invited Presenter. Ameriflux Meeting. Washington, D.C. September 21-23, 2009.
- Oechel, W.C. Invited Participant. NASA VuRSAL Workshop. Fairbanks, AK. August 10-13, 2009.
- Oechel, W.C. Invited Participant. Ensenada, Mexico. August 4, 2009.
- Oechel, W.C. Invited Presenter. Ecological Society of America Annual Meeting. Long-term observations of trace gas fluxes in the Arctic. Albuquerque, NM. August 2-7, 2009.
- Oechel, W.C. Invited Participant. US Department of Energy, Office of Health and the Environment. Research Design Meeting. Salt Lake City, UT. July 14, 2009.

Oechel, W.C. Invited Participant. IPY Meeting. Fairbanks, AK. March 5-8, 2009.

Oechel, W.C. Invited Presenter. SERDEP Presentation. Washington, D.C. March 11-12, 2008.

Oechel, W.C. Invited Participant. SAB Meeting. Washington, D.C. March 10-13, 2009.

Oechel, W.C. Invited Participant. Pelicano Board Meeting. Ensenada, Mexico. January 21, 2009.

Oechel, W.C. Invited Participant. AGU Annual Meeting. San Francisco, CA. December 15-19, 2008.

Oechel, W.C. Invited Presenter. November 14-20, 2008. 7th Annual AsiaFlux Workshop. Seoul, Korea.
November 17-19, 2008.

Oechel, W.C. Invited Field Visit. Sarawak, Malaysia. August 23-27, 2008.

Oechel, W.C. Invited Presenter. University of Malaysia Faculty Workshop. Sarawak, Malaysia. August 16-22,
2008.

Oechel, W.C. Invited Presenter. NICOP Meeting. University of Alaska, Fairbanks. Fairbanks, AK. June 28-July 5,
2008.

Oechel, W.C. Invited Presenter. After the Melt - Ecological Responses to Arctic Climate Change. Danish National
Environmental Research Institute and the University of Aarhus. Aarhus, Denmark. May 5-7, 2008.

Oechel, W.C. Invited Presenter. Workshop at CIBNOR. La Paz, Mexico. May 20-23, 2008.

Oechel, W.C. Invited Presenter. AGU meeting. San Francisco, CA. December 10-14, 2007.

Oechel, W.C. Convener. International Internships Program and Collaborations with CICESE. Ensenada, Mexico.
November 12, 2007.

Oechel, W.C. Invited Presenter. San Diego Natural History Museum Global Climate Change Lecture Series. San
Diego, CA. November 14, 2007.

Oechel, W.C. Invited Presenter. San Diego Science Alliance Board Meeting. San Diego, CA. November 14, 2007.

Oechel, W.C. Convener. SNACS Synthesis Meeting. Monterey, CA. October 7-8, 2007.

Oechel, W.C. Invited Panelist. Civilian Applications of Unmanned Aircraft Systems Meeting. Boulder, CO.
October 1-3, 2007.

Oechel, W.C. Invited Panelist. CMMAC Advisory Panel. Boulder, CO. September 23-25, 2007.

Oechel, W.C. Invited Participant. NASA European Space Agency Meeting. Frascati, Italy. September 8-11, 2007.

Oechel, W.C. Invited Participant. International Symposium and Workshop on Tropical Peatlands. Indonesia August
15-September 4, 2007.

Oechel, W.C. Invited Panelist. PIRE Review Panel. Arlington, VA. May 22-25, 2007.

Oechel, W.C. Invited Participant. IARC Science Advisory Board Review. Fairbanks, AK. May 9-12, 2007.

Oechel, W.C. Invited Participant. Symposium on Carbon in Peatlands. Wageningen, Netherlands. April 13-19,
2007.

Oechel, W.C. Invited Participant. CSIRO Site Visit. Cairns, Australia. March 22-April 4, 2007.

Oechel, W.C. Award Recipient and Lecturer. Albert W. Johnson University Research Lectureship San Diego State University. San Diego, CA. March 21, 2007.

Oechel, W.C. Invited Presenter. UC Berkeley Seminar. Berkeley, CA. March 7, 2007.

Oechel, W.C. Invited Participant. AMAP - Scientific Synthesis Assessment of Arctic Carbon. Seattle, WA. February 26, 2007 – March 1, 2007.

Oechel, W.C. Invited Participant. IARC Conference. Fairbanks, AK. February 19-21, 2007.

Oechel, W.C. Invited Participant. NACP Carbon Program Planning. Colorado Springs, CO. January 22-26, 2007.

Oechel, W.C. Invited Participant. Pt. Arena Site Evaluation, Sacramento, CA. January 12-17, 2007.

Oechel, W.C. Invited Participant. UC Davis Research, Sacramento, CA. January 4-9, 2007.

Oechel, W.C. Invited Participant. CaLEON meeting. San Francisco, CA. December 16-20, 2006.

Oechel, W.C. Invited Participant. AGU meeting. San Francisco, CA. December 9-15, 2006.

Oechel, W.C. Invited Participant. Asia Flux Conference/Meetings. Chiang Mia, Thailand, Hong Kong, Korea. November 20, 2006 – December 8, 2006.

Oechel, W.C. Invited Participant. IGERT Panel Review. Washington, DC. November 26-30, 2006.

Oechel, W.C. Invited Participant. EU Open Science Conference. Crete, Greece November 9-20, 2006.

Oechel, W.C. Invited Participant. UC Davis JDPE. Sacramento, CA. October 25-31, 2006.

Oechel, W.C. Invited Participant. BERAC/FACE Review. Washington, DC. October 8-11, 2006.

Oechel, W.C. Invited Participant. Annual Berkeley Atmospheric Sciences Symposium. Berkeley, CA. September 28-30, 2006.

Oechel, W.C. Invited Participant. UC Davis JDPE. Sacramento, CA. September 25-28, 2006.

Oechel, W.C. Invited Participant. UC Davis JDPE. Sacramento, CA. September 21-23, 2006.

Oechel, W.C. Invited Participant. Research Equipment Meeting. Seattle, WA. September 15-16, 2006.

Oechel, W.C. Invited Participant. Project Management. Barrow, AK. September 9-14, 2006.

Oechel, W.C. Invited Participant. UC Davis JDPE. Sacramento, CA. September 7-8, 2006.

Oechel, W.C. Invited Participant. BASC. Barrow, AK. August 19-30, 2006.

Oechel, W.C. Invited Participant. NSF Reporters. Barrow, AK. July 19-29, 2006.

Oechel, W.C. Invited Participant. Union of Concerned Scientists. Sacramento, CA. May 15-16, 2006.

Oechel, W.C. Invited Participant. Methane Advisory Group. Lincoln, NB. April 17-19, 2006.

Oechel, W.C. Invited Participant. SNACS Meeting. Seattle, WA. March 24-28, 2006.

Oechel, W.C. Invited Participant. PISCES Management Retreat. Ensenada, MX. February 9-12, 2006.

Oechel, W.C. Invited Participant. Arctic Flux Platform. Seattle, WA. January 6-8, 2006.

Teaching, Mentoring, Advising, and Supervising Activities:

Recent International Teaching

BIOL 596 Sustainability of Coastal Ecosystems (International Course team taught with CIBNOR La Paz, BCS, Mexico. Spring 2006, 2009, 2010.

BIOL 597 Ecophysiology of Wines, Vines, and Vineyards (International Course team taught with CICESE, Ensenada, BC, Mexico. Spring 2012.

Current SDSU Joint Doctoral Program in Ecology Students (Serving as Major Professor)

Eric Wilkman: Plant and Microbial Processes and Controls on Carbon Efflux, Storage, and Decomposition in the North American Arctic. SDSU/UCDavis JDPE

Robert Wagner: The contribution of methanotrophic soil bacteria to Arctic carbon dioxide fluxes. SDSU/UCDavis JDPE

Melissa Ward: Air-Sea CO₂ exchange and carbon sequestration in eelgrass beds (*Zostera marina*) in the coastal waterways of San Diego, CA. SDSU/UCDavis JDPE

Current SDSU Masters Students (Serving as Major Professor)

Rachel Stratton The impact of invasive plants on water, energy, and CO₂ fluxes using eddy covariance in coastal sage scrub. M.S., Ecology. SDSU.

Yareli Sanchez. Patterns and controls on Mangrove greenhouse gas fluxes in Magdalena Bay, BCS, Mexico M.S., Ecology. SDSU.

Josediego Uribe: M.S., Sustainability of coastal ecosystems. Ecology. SDSU.

Alessandra Rossi. Longer term productivity and carbon fluxes in the Californian Chaparral at Sky Oaks. M.S., Ecology. SDSU

Past Graduate Students

Hiroki Ikawa: Patterns and controls on marine CO₂ flux from the Arctic to temperate regions. SDSU/UCDavis JDPE.

Cove Sturtevant: Remote sensing and CO₂ budgets. SDSU/UCDavis JDPE.

Thomas Bell. Horizontal and vertical fluxes of carbon in the Larrea/Carbon desert of La Paz, BCS, Mexico. M.S. Ecology. SDSU. Rommel Zulueta: (2011, Anticipated) Regional estimates of arctic carbon flux using aircraft. SDSU/UCDavis JDPE.

Cheryl Laskowski. (2010) Annual, interannual, and spatial scale patterns of CO₂ flux in the Arctic. SDSU/UCDavis JDPE.

Zona, Donatella. (2009). Patterns and controls on methane and carbon dioxide fluxes on the Arctic Coastal Plain. Ph.D. Dissertation, University of California, Davis. 87 pp.

- Jawlik, Mary. (2009). The effects of land use on nutrient export from a lowland tropical wet forest in Costa Rica. M.Sc. Thesis. San Diego State University. 31 pp.
- Skadberg, Kirstin. (2008). Patterns and drivers of nearshore coastal air-sea CO₂ exchange. Ph.D. Dissertation, San Diego State University and the University of California, Davis. 93 pp.
- Luo, Hongyan. (2007). The importance of a Mediterranean type ecosystem in trace gas fluxes from chaparral of Southern California. Ph.D. Dissertation, San Diego State University and the University of California, Davis.
- Kwon, Hyojung. (2005). Temporal and spatial patterns of carbon dioxide exchange over Arctic ecosystems. Ph.D. San Diego State University and the Dissertation, University of California, Davis.
- Kinoshita, Glen. (2005). The effects of three seasons of elevated temperature and water table manipulation on ecosystem carbon fluxes, soils, biomass, and plant nutrient status of an arctic coastal tundra ecosystem near Barrow, Alaska. M.Sc. Thesis. San Diego State University. 104 pp.
- Hastings, Steven J. (2005). Land-atmospheric interactions of CO₂, H₂O and energy balance in a desert coastal ecosystem in Baja California and its relevance to global change. Ph.D. Dissertation. CIBNOR La Paz, BCS, Mexico. 134 pp.
- Cheng, Yufu. (2003). Effects of manipulated atmospheric carbon dioxide concentrations on carbon dioxide and water vapor fluxes in Southern California chaparral. Ph.D. Dissertation, San Diego State University and the University of California, Davis. 112 pp.
- Stylinski, Cathlyn. (2000). Effects of resource availability on plant reflectance and physiology. Ph.D. Dissertation, San Diego State University and the University of California, Davis. 134 pp.
- Vourlitis, George. (1997). Large-scale measurements of net CO₂ flux and energy balance of Alaskan arctic tundra ecosystems. Ph.D. Dissertation, San Diego State University and the University of California, Davis. 144 pp.
- Cook, Andrea. (1996). Effects of long-term elevated atmospheric CO₂ on a subarctic *Nardus stricta* grassland in Iceland: lessons from a natural CO₂ spring. Ph.D. Dissertation, San Diego State University and the University of California, Davis. 79 pp.
- Langsford, Derek. (1996). Temporal and spatial variability of seed weight, water relations, and carbon translocation in *Ceanothus* shrubs of the California chaparral. Ph.D. Dissertation, San Diego State University and the University of California, Davis. 102 pp.
- Hinkson, Cara. (1996). Gas exchange, growth response, and nitrogen dynamics of *Quercus agrifolia* under elevated atmospheric CO₂ and water stress. M.Sc. Thesis, San Diego State University. 99 pp.
- Jenkins, Mitchell. (1993). Effects of atmospheric carbon dioxide level and water stress on growth and physiology of seedlings of two chaparral shrubs. M.Sc. Thesis, San Diego State University. 94 pp.
- Sparks, Steven. (1989). Photosynthate allocation patterns and mode of postfire reproduction in two shrub species from the California chaparral. Ph.D. San Diego State University and the Dissertation, University of California, Davis. 178 pp.
- Knoll, David. (1988). Nitrogen and phosphorus disappearance rates and biomass production in water hyacinth, *Eichhornia crassipes* as a function of nitrogen and phosphorus concentration and N:P ratio. M.Sc. Thesis, San Diego State University. 81 pp.
- Perry, Stewart. (1987). Photosynthesis and carbon allocation in the aquatic macrophytes *Hydrilla verticillata* and *Potamogeton pectinatus*. M.Sc. Thesis, San Diego State University. 75 pp.

- Mauffette, Yves. (1987). Seasonal photosynthate allocation and leaf chemistry in relation to herbivory in the coast live oak, *Quercus agrifolia*. Ph.D. Dissertation, San Diego State University and the University of California, Davis. 134 pp.
- Prudhomme, Thomas. (1984). Priorities determining photosynthate use in leaves of a deciduous and an evergreen subarctic shrub from northern Quebec. Ph.D. Dissertation, McGill University, Montreal, P.Q., Canada. 123 pp.
- Reid, Chantal. (1984). Possible physiological Indicators of senescence in two chaparral shrub species along a fire-induced age sequence. M.Sc. Thesis, San Diego State University. 159 pp.
- Tissue, David. (1984). Physiological and growth response of *eriophorum vaginatum* to elevated CO₂ and temperature in the Alaskan tundra. M.Sc. Thesis, San Diego State University. 104 pp.
- Chester, Ann. (1984). Effects of nitrogen availability on nitrogen allocation and plant growth in evergreen and deciduous species of *Vaccinium* Ph.D. Dissertation, Duke University. Co-Supervisor - Boyd Strain, Supervisor. 104 pp.
- Houpis, James L.J. (1983). Photosynthesis, water relations and plant distribution: An Ecophysiological study. M.Sc. Thesis, San Diego State University. 109 pp.
- Lawrence, William. (1983). Soil temperature effects on carbon exchange in taiga species of interior Alaska. Ph.D. Dissertation, San Diego State University and the University of California, Davis. 131 pp.
- Bigger, Mollie. (1981). Effect of nutrient enhancement on photosynthesis in native vascular and nonvascular plants growing in the Alaskan tundra at Eagle Creek., M.Sc. Thesis, San Diego State University. 103 pp.
- Sveinbjornsson, Bjartmar. (1979). Controls on the CO₂ exchange in arctic *Polytrichum* mosses. Ph.D. Dissertation, McGill University. 190 pp.
- Mustafa, Jamil. (1978). The effect of growth and species specific variability on photosynthesis along an elevational gradient in the chaparral. M.Sc. Thesis, McGill University. 74 pp.
- Carstairs, Anne. (1976). The physiological ecology of *Cladonia alpestris* in the subarctic at Schefferville, Quebec. M.Sc. Thesis, McGill University. 88 pp.
- Hicklenton, Peter. (1975). The physiological ecology of *Dicranum fuscencens* Turn. in the subarctic. M.Sc. Thesis, McGill University. 146 pp.
- Auger, Suzzane. (1974). Growth and photosynthesis of *Larix laricina* (Du Roi) K. Koch in the subarctic at Schefferville, Quebec. M.Sc. Thesis, McGill University. 114 pp.
- Vowinckel, T. (1974). The effect of climate on the photosynthesis of *Picea mariana* at the subarctic tree line. Ph.D. Dissertation, McGill University (with W. Boll). 147 pp.

Former PISCES Students (Served as supervisor to undergraduate and graduate science students involved with bringing inquiry, kit-based science lessons to K-6 schools in San Diego County, La Paz, Baja California Sur, Mexico, and the North Slope of Alaska as part of a National Science Foundation grant-funded program)

Alejandra Blakeslee	Debbie DeRoma	Heather Karnes
Jessica Bray	Ian Fellows	Robin Keith
Julianne Browne	Stacie Fejtek	Glen Kinoshita
Karen Campbell	Carey Galst	Megan Lane
Henry Carson	Scott Graham	Chris Lieder
Laura Dane	Christine Gregor	Krissy Lovering
Rebekka Darner	Jill Henry	Nathan Marshall
Kimberly Davis	Jennifer Hunnicutt	Brian Matusek

Maureen McCormack
Mariah Meek
Krista Mendelsohn
Jacob Morton
Kathleen Patarak

Krista Pease
Christine Reif
Maggie Reinbold
Ale Rios
Linnea Spears

Jennifer Targowski
Tina Tretinjak
Jason Webber
Tania Zamora

Past Collaborating Students from other Institutions

Erika Anderson
Kalamazoo College, Michigan
Undergraduate working for the summer in Alaska correlating spectroradiometric data with carbon flux measured using the eddy covariance technique

Sionnan Fitzgerald
Centro de Investigaciones Biológicas del Noroeste, S.C. (CIBNOR), La Paz, B.C.S. Mexico
Master's student studying ecosystems in La Paz and turtle survival.

Stan Houston
California State University, Los Angeles
Arctic research correlating spectroradiometric data with carbon flux measured using the eddy covariance technique.

Dave Loehlin
University of Chicago
Undergraduate GCEP/SURE program, doing an independent study of soil respiration in the chaparral at Sky Oaks

Atushi Nojiri
Japan
Graduate Student

Markus Reichstein
Department of Plant Ecology, University of Bayreuth, Germany
Doctoral student working on a respiration model using nighttime eddy covariance data from Sky Oaks

Cesar Salinas
Centro de Investigaciones Biológicas del Noroeste, S.C (CIBNOR), La Paz, B.C.S. Mexico
Doctoral student working on a vegetation model on a joint, CIBNOR-SDSU NSF International Grant, now graduated.

Maosheng Zhao
START Regional Centre for Temperate East Asia, Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China
Graduate student working on parameterizing a Biogeographical model for Southern California and all of Baja California

Masayoshi Mano
Japan
Doctoral student working on carbon and methane flux of a marsh in Alaska to compare with SDSU's coastal sedge carbon flux measurements

Yonghai Qian
China
Doctoral student working on current and future vegetation and ecosystem metabolism of Southern and Baja California