

# Andrew J. Oliphant

## Curriculum Vitae

Professor

Department of Geography & Environment  
San Francisco State University  
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### Education

2000	Ph.D.	Department of Geography, University of Canterbury
1996	M.S. (First Class)	Department of Geography, University of Canterbury
1994	B.A.	Department of Geography, Massey University
1989	B.A.	English Literature, Maori Language, University of Canterbury

### Professional Experience

2019 -	Chair Department of Geography & Environment San Francisco State University, San Francisco, California
2011 -	Professor Department of Geography & Environment San Francisco State University, San Francisco, California
2007-2011	Associate Professor Department of Geography and Human Environmental Studies San Francisco State University, San Francisco, California
2002-2007	Assistant Professor (Tenure Track) Department of Geography and Human Environmental Studies San Francisco State University, San Francisco, California
2001- 2012	Adjunct Faculty, Summer Field Course, Montana Environmental Science Program Indiana University, Bloomington, Indiana
2000-2002	Postdoctoral Fellow Atmospheric Science Program, Department of Geography Indiana University, Bloomington, Indiana

1996-1999 Lecturer, M.S. thesis advisor, Teaching Assistant  
Department of Geography  
University of Canterbury, Christchurch, New Zealand

### **Honors and Awards**

2013, 2018 Water Research and Policy Initiatives research award  
2005, 09, 19 San Francisco State University President's Sabbatical Award  
2002, 06 San Francisco State University Vice President's Assigned Time Award  
1997 New Zealand Royal Society Ph.D. Scholarship (3 years)  
1995 University of Canterbury, Centre for Atmospheric Research, Graduate Climate Research Award

### **Professional Service**

**Editorial board:** 2005- *Geography Compass*

**Panel Member:** 2009- American Geophysical Union expert panelist for journalist questions during United Nations Climate Change Conference Copenhagen 2009 and beyond

2003-2007 World Meteorological Organization, oversight of rewriting of WMO's *Guide to Agricultural Meteorological Practices*

#### **Journal Reviewer:**

*Annals of the American Association of Geographers, Atmospheric Chemistry and Physics Discussions, Agriculture and Forest Meteorology, Bulletin of the American Meteorological Society, Physical Geography, Journal of Geophysical Research – Atmospheres, International Journal of Biometeorology, Monthly Weather Review, Meteorologische Zeitschrift, Geophysical Research Letters, Journal of Applied Meteorology and Climatology, Tellus-B, International Journal of Climatology, Progress in Physical Geography*

**Proposal Reviewer:** Canadian National Research Council, National Science Foundation Polar Program, US Department of State, Science Centers Program, NSF Biogeosciences

**Session Chair:** *Association of American Geographers* Annual Meeting, Wetlands and Mountain Meadows, New Orleans, April 2018.

*Association of American Geographers* 102nd Annual Meeting, 1508: Surface-Atmosphere Interactions, April 2007. Also co-field trip convener.

*Association of American Geographers* 99<sup>th</sup> Annual Meeting, Session 7239: Environment: Scientific Perspectives, New Orleans, March 2003.

*American Geophysical Union Fall Conference*, Session B51A: Water, Energy and Carbon Cycles in Terrestrial Systems: Local-Scale Observations Through FLUXNET and Other Micrometeorological Tower Sites, San Francisco, December, 2001.

**Judge:** *Association of American Geographers Climate Specialty Group* Student Paper Presentation Competition, 99<sup>th</sup> Annual Meeting, New Orleans, March 2003, Los Angeles, April 2013.

#### **Invited Speaker:**

University of California, Berkeley, Department of Landscape Architecture and Environmental Planning, April 2019. Energy and Water in Urban Climatology.

San Francisco State University, Dept. of Geography & Environment. October 2018. The role of vegetation in urban climates.

University of Utah, Dept. of Atmospheric Sciences. April 2017. Micrometeorological impacts of an ephemeral desert city: The Burning Man experiment.

Romberg Tiburon Center, Tiburon, California, April 2017, Climate Change in California: Regional predictions and future urban climates.

San Francisco State University, Dept. of Geography & Environment, San Francisco, California, November 2016, Micrometeorology of an ephemeral city, the Burning Man Experiment.

Exploratorium, San Francisco, Oct 24th, 2013, Bay Area Science Festival: Turbulence in the City.

Exploratorium, San Francisco, Oct 3<sup>rd</sup>, 2013, After Dark Program: Fog and the microclimates of San Francisco.

Romberg Tiburon Center, California, May 2013, Observations of surface-atmosphere interactions using the CSU-MAPS, a mobile atmospheric profiling system.

San Francisco State University, Department of Geosciences, San Francisco, California, March 2013: Observations of the surface energy balance from the Dry Valleys, Antarctica to central Iran.

Romberg Tiburon Center, Climate Change Workshop, Tiburon, California, May 2012, Climate Science on a Global Level.

San Francisco State University, Department of Geosciences, San Francisco, California, October 2010: Impact of changing sky conditions on light regimes and photosynthesis by terrestrial ecosystems.

Waikato University, Department of Earth and Oceanic Sciences, Hamilton, New Zealand, March 2010: On clouds, aerosols and carbon sequestration by terrestrial ecosystems.

Auckland University, School of Environmental Science, Auckland, New Zealand, March 2010: The role of diffuse light on carbon sequestration by terrestrial ecosystems.

Institute for Meteorology and Climatology, Karlsruhe Institute of Technology, Garmisch-Partenkirchen, Germany, November 2009: The role of diffuse light on gross primary production of terrestrial ecosystems.

French National Institute for Agricultural Research, Bordeaux, France, October 2009: The role of diffuse light on gross primary production of terrestrial ecosystems.

Geography Forum, San Francisco State University, April 2009: Global carbon responses to changes in quantity and quality of light.

Department of Biology, San Francisco State University, March 2009: The role of clouds and aerosols on carbon sequestration by terrestrial ecosystems.

Focus the Nation national teach-in, San Francisco State University, January 2008: Climate Change Science, an IPCC update.

Gateway Antarctica, University of Canterbury, December 2005: Antarctic Climate Change.

Gateway Antarctica, University of Canterbury, September 2005: Antarctic Micrometeorology.

British Antarctic Survey, Cambridge, England, July 2005: Mass and energy fluxes through of ice-cored till in the Dry Valleys, Antarctica

New Zealand Meteorological Society, Christchurch, New Zealand, August 2004: The role of clouds in carbon sequestration by terrestrial ecosystems: a Gaia effect?

University of California, Davis, Department of Land, Air and water resources, Davis, California, June 2004: Estimation of the storage heat flux and energy balance of a temperate deciduous forest.

Moss Landing Marine Laboratories, California State University, Moss Landing, California, April, 2004: Micrometeorological measurements of ecosystem-atmosphere exchange of CO<sub>2</sub>, water vapor and energy.

Romberg Tiburon Center for Environmental Studies, San Francisco State University, November 2003: Eddy covariance measurements of ecosystem-atmosphere flux of CO<sub>2</sub> and energy.

Indiana University, Department of Geography, Bloomington, Indiana, October 2000: Spatial variability in surface energy exchanges in an alpine watershed.

New Zealand Meteorological Society, Christchurch, New Zealand, August 1999: Mapping surface energy balances in an alpine watershed.

Department of Energy, Pacific Northwest National Laboratory, Richland, Washington, May 1997: Links between sea- breezes and thunderstorms over a tropical island.

New Zealand Meteorological Society, Christchurch, New Zealand, November 1996: Structure and evolution of tropical thunderstorms.

### **Membership in Professional Societies:**

- American Association of Geographers
- American Geophysical Union
- American Meteorological Society
- New Zealand Meteorological Society

### **University Service**

2020-21 Working group: Retention of women and people of color in academia  
2019- Chair's Council and Science Council  
2011-15 Infrastructure Committee, College of Science and Engineering  
2012 Review Committee, Romberg Tiburon Center and Director  
2010 External adviser, SFSU University Climate Action Plan  
2008 Research Committee, College of Behavioral and Social Sciences, SFSU  
2007-2008 SFSU International Programs, panelist for selecting US exchange student candidates and panelist for orientation program for foreign exchange students  
2007-2008 Steering Committee, Focus the Nation national Climate Change teach-in, San Francisco State University. Also panelist, moderator and leader of student group to develop SFSU carbon footprint calculator and informational poster  
2007- Retention, Tenure and Promotion committee, Department of Geography and Human Environmental Studies, SFSU, chair of committee (2010/11)  
2006- Graduate Advisor, Department of Geography and Human Environmental Studies, SFSU  
2004- Graduate Committee, Department of Geography and Human Environmental Studies, SFSU  
2004-2006 Chair, Graduate Literacy Committee, Department of Geography and Human Environmental Studies, SFSU  
2004-2005 Environmental Studies Program, Earth Systems Science curriculum review  
2003-2004 Curriculum Committee, Department of Geography and Human Environmental Studies, SFSU  
2003 (Nov) Romberg Tiburon Center for Environmental Studies, invited research seminar

- 2003-2006 Undergraduate Advisor, Department of Geography and Human Environmental Studies, SFSU
- 2002-2006 Chair, Faculty-Student Consultative Committee, Department of Geography and Human Environmental Studies, SFSU
- 2002-2003 Search Committees for three faculty positions, Department of Geography and Human Environmental Studies, SFSU
- 2002 (Oct) Environmental Studies Program, invited seminar on Climate Change

## Community Service

- 2018 Mentor, 'Hearts of GOLD', NSF funded workshop to train leadership in increasing diversity and inclusivity in the geosciences, Colorado Springs, August 2018
- 2017 Participant, 'Hearts of GOLD', NSF funded workshop to train leadership in increasing diversity and inclusivity in the geosciences, Colorado Springs, August 2018
- 2013- Annual presentation/demonstration on measuring urban climates in Advanced Placement Environmental Science classes Gateway High School.
- 2011- Science advisor: Exploratorium Science Museum, San Francisco
- 2010 Guest speaker: Benjamin Franklin Intermediate School, Daly City: The science of human-climate interaction in Shackleton's Antarctic journeys.
- 2010 Guest on Hamilton Community Radio show, Hamilton, New Zealand: "Environment Matters"
- 2009- Expert analysis for media outreach program developed by American Geophysical Union during and following Copenhagen Climate Change Conference, December 2009.
- 2005 Provided atmospheric measurement workshop and field measurement program for high school science outreach program (SFROCKS, Geosciences, SFSU), July 2005
- 2005 - Provided expertise for meteorological monitoring station development for San Francisco Bay National Estuarine Research Reserve, Rush Ranch wetland site
- 2004 - Provided expertise for meteorological monitoring station development and maintenance for *CiCoR* marine monitoring program over San Francisco Bay at Romberg Tiburon Center, SFSU
- 2003 -2004 Automated meteorological station construction and maintenance for high school science outreach program *SFRocks*, (Geosciences, SFSU)
- 2001, 2002 Coordinator, Indiana State Science Olympiad, Dynamic Planet Event
- 2001 Panel member, Earth Day 2001 Global Warming forum hosted by InPIRG, Indiana University
- 2001 Mentor, REHSS (Research Exploration for High School Students), Indiana University

## Research

### Research Funding

- 2019-2024 Wetlands Restoration for Greenhouse Gas Reduction Program, California Department of Fish and Wildlife. *Ecosystem and Community Resiliency in the Sierra Nevada: Restoration of the Clover Valley Ranch*, PI of sub-contract to The Sierra Fund, \$380,000.
- 2019-2022, California Department of Food and Agriculture Healthy Soils Project, *Impact of orchard mulch and compost practices on soil health and greenhouse gas emissions*, sub-contract to Gold Ridge Resource Conservation District, (Principal Investigator), \$140,000
- 2013-2016 NSF OCE: *Investigations on the Cycling of Mercury from the Ocean to Fog and Deposition to Land in Coastal California*, sole PI of sub-contract to UCSC, \$23,100.
- 2013-2014 San Francisco State University Office of Research and Sponsored Programs (sole PI): *The Burning Man Project*.
- 2012-2013 NASA SBIR Phase II Proposal (S1.08)- *Mobile Greenhouse Gas Flux Analyzer for Unmanned Aerial Systems*, sole PI of subcontract to Los Gatos Research \$50,583.
- 2010- 2012 NSF-Major Research Instrumentation (PI): Collaborative Research MRI: *Acquisition of a Mobile Atmospheric Profiling System for Multi-Campus Research and Education (CSU-MAPS)* \$865,379.
- 2010-2011 San Francisco State University Office of Research and Sponsored Programs (sole PI): *Field-based experimental research on atmospheric cold pool*. \$14,840.
- 2009 – 2012 NSF-Geography and Spatial Sciences (sole PI): *Global ecosystem response to changing light environments and the implications for climate feedback*, \$148,739.
- 2008 California State University Summer Stipend Program (sole PI): *Desert climate studies in Iran*, \$6,000.
- 2005 University of Canterbury, Research Enterprise Grant (PI): *Micrometeorological fieldwork in Yadz, Iran* (\$10,000)
- 2003 California State University Summer Stipend Program (sole PI): *Air Pollution Transport in California's Central Valley*, \$6000.
- 2002 California State University Mini-Grant Program: *Radiation and Forest Ecosystem Dynamics*, \$4,500
- 2001 Department of Energy, National Institute for Global Environmental Change, with Schmid, H.P., Grimmond, C.S.B., Su, H-B. (PIs) *Forest-Atmosphere Exchange of CO<sub>2</sub> over a Mixed Hardwood Ecosystem in the Midwest*, renewal 1 yr, \$301,458.

## Research Publications

### Refereed Journal Articles

- Baguskas, S.A., Oliphant, A.J., Clemesha, R. E. S., & Loik, M. E. 2021. Water and Light-Use Efficiency Are Enhanced Under Summer Coastal Fog in a California Agricultural System. *Journal of Geophysical Research - Biogeosciences*, 126, <https://doi.org/10.1029/2020JG006193>
- Blackburn, D.A., Oliphant, A.J. & Davis, J.D. Carbon and Water Exchanges in a Mountain Meadow Ecosystem, Sierra Nevada, California. *Wetlands* 41, 39 (2021). <https://doi.org/10.1007/s13157-021-01437-2>

- Oliphant, A.J., Baguskas, S.A., Fernandez, D.M. 2021. Impacts of low cloud and fog on surface radiation fluxes for ecosystems in coastal California. *Theoretical and Applied Climatology* **144**, 239-252, <https://doi.org/10.1007/s00704-021-03518-y>
- Oliphant, A.J. and Stoy, P.C. 2018. An evaluation of semi-empirical models for partitioning photosynthetically active radiation into diffuse and direct beam components. *Journal of Geophysical Research: Biogeosciences* **123**, 889-901.
- Fernandez, D.M., Torregrosa, A., Weiss-Penzias, P.S., Zhang, B.J., Sorensen, D. Cohen, R.E., McKinley, G., Kleingartner, J. Oliphant, A.J. and Bowman, M. 2018. Fog Water Collection Effectiveness: Mesh Intercomparisons. *Aerosol and Air Quality Research*, doi: 10.4209/aaqr.2017.01.0040.
- Oliphant, A.J. Stein, S. and Bradford, G. 2018: Micrometeorology of an ephemeral city, the Burning Man Experiment, *Urban Climate*, **23**, 53-70. <http://doi.org/10.1016/j.uclim.2017.03.001>
- Castelvi, F. and Oliphant, A. J. 2017: Daytime sensible and latent heat flux estimates in a mountain meadow using a method based on surface renewal which requires land surface temperature and measurements taken at low frequency as input. *Agriculture and Forest Meteorology* (in press).
- Weiss-Penzias, P., Coale, K. Heim, W., Fernandez, D., Oliphant, A.J., Dodge, C., Hoskins, D., Farlin, J., Moranville, R. and Olson, A., 2016: Total- and monomethyl-mercury and major ions in coastal California fog water: Results from two years of sampling on land and at sea Total- and monomethyl-mercury in coastal California fog on land and at sea, *Elem Sci Anth* **4**: 00101. DOI:10.12952/journal.elementa.000101
- Thompson, A., Davis, J.D. and Oliphant, A.J., 2016: Surface runoff and soil erosion under eucalyptus and oak canopy. *Earth Surface Processes and Landforms*, DOI: 10.1002/esp.3881
- Oliphant, A.J., Hindmarsh, R.C.A., Cullen, N.J. and Lawson, W. 2015: Microclimate and mass fluxes of debris laden ice surfaces in the Taylor Valley, Antarctica, *Antarctic Science*, **27**, 85-100. doi:10.1017/S095410201400053.
- Clements, C. and Oliphant, A.J., 2014: The California State University- Mobile Atmospheric Profiling System (CSU-MAPS): A facility for research and education in boundary-layer meteorology, *Bulletin of the American Meteorological Society*, **95**, 1713-1724. doi:10.1175/BAMS-D-13-00179.1
- Pisek, J., Ryu, Y., Sprintsin, M., He, L., Oliphant, A.J., Korhonen, L. Kuusk, J. Kuusk, A., Bergstrom, R., Verrelst, J., Alikas, K., 2013: Retrieving vegetation clumping index from Multi-angle Imaging SpectroRadiometer (MISR) data at 275 m resolution, *Remote Sensing of Environment*, **138**, 126-133. ISSN 0034-4257, <http://dx.doi.org/10.1016/j.rse.2013.07.014>.
- Steiner, A.L, Mermelstein, D., Cheng, S.J., Twine, T.E. and Oliphant, A.J., 2013: Observed impact of atmospheric aerosols on the surface energy budget. *Earth Interactions*, **17**, 1-22.
- Pisek, J. and Oliphant, A.J., 2013: A note on the height variation of foliage clumping: comparison with remote sensing retrievals. *Remote Sensing Letters*, **4**, 400-408.
- Oliphant, A.J. 2012: Terrestrial ecosystem-atmosphere exchange of CO<sub>2</sub>, water and energy from FLUXNET; Review and meta-analysis of a global in-situ observatory. *Geography Compass*, **6**, 689–705.
- Oliphant, A.J., Zawar-reza, P., Azizi, G., Dehghanpour, A. and Harrison, J., 2011: Surface energy and water vapor fluxes observed in a desert plantation in central Iran. *Journal of Arid Environments*, **75**, 926-935, doi:10.1016/j.jaridenv.2011.03.011.

- Oliphant, A.J, Dragoni, D., Deng, B, Grimmond, C.S.B., Schmid, H-P. and Scott, S.L., 2011: The role of sky conditions on gross primary production in a mixed deciduous forest, *Agriculture and Forest Meteorology*, **151**, 781-79, doi:10.1016/j.agrformet.2011.01.005.
- Yang, W., Ni-Meister, W., Kiang, N., Moorcroft, P., Strahler, A.H. and Oliphant, A., 2010: A clumped-Foliage Canopy Radiative Transfer Model for Global Dynamic Terrestrial Ecosystem Model II: Validation, *Agriculture and Forest Meteorology*, 150(7-8):895-907, doi:10.1016/j.agrformet.2010.02.008.
- Oliphant, A.J., 2008: Hydroclimatology, in *McGraw Yearbook of Science and Technology* AccessScience@McGraw-Hill, <http://www.accessscience.com>, DOI 10.1036/1097-8542.YB080340
- Oliphant, A.J. Grimmond, C.S.B., Schmid, H-P. and Wayson, C.A., 2006: Local-scale heterogeneity of photosynthetically active radiation (PAR), absorbed PAR and net radiation as a function of topography, sky conditions and leaf area index, *Remote Sensing of Environment* **103**, 324-337.
- Froelich, N.J., Schmid, H.P., Grimmond, C.S.B., Su, H.-B. and Oliphant, A.J., 2005: Flow divergence and density flows above and below a deciduous forest. Part I: non-zero mean vertical wind above canopy, *Agriculture and Forest Meteorology* **133**, 140-152.
- Oliphant, A.J., 2005: Microclimate variability in complex terrain. *CSU Geospatial Review*, **3**, 3.
- Oliphant, A.J., Grimmond, C.S.B., Zutter, H.N., Schmid, H.P., Su, H.-B., Scott, S.L., Offerle, B., Randolph, J.C. and Ehman, J., 2004: Heat storage and energy balance fluxes for a temperate deciduous forest, *Agriculture and Forest Meteorology*, **126**, 185-201.
- Su, H-B, Schmid, H. Gimmond, C.S.B., Vogel, C. and Oliphant, A.J., 2004: Spectral Characteristics and corrections of long-term eddy covariance measurements over two mixed hardwood forests in non-flat terrain. *Boundary Layer Meteorology* **110**, 213-253.
- Oliphant, A.J., Spronken-Smith, R.A and Sturman, A.P. 2003: Spatial variability of surface radiation fluxes in mountainous terrain. *Journal of Applied Meteorology* **42**, 113-128.
- Sturman, A.P., Bradley, S., Drummond, P., Grant, K., Gudikson, P., Hipkin, V., Kossman, M. McGowan, H.A., Oliphant, A.J., Owens, I.F., Powell, S., Spronken Smith, R.A., Webb, T. and Zawar-Reza, P., 2003: The Lake Tekapo experiment (LTEX): an investigation of atmospheric boundary layer processes in complex terrain. *Bulletin of the American Meteorological Society* **84**, 371-380.
- Kossmann, M. Sturman, A.P, Zawar-Reza, P. McGowan, H.A., Oliphant, A.J., Owens I.F. and Spronken-Smith, R., 2002: Analysis of the wind field and the heat budget in an alpine lake basin under summertime fair weather conditions. *Meteorology and Atmospheric Physics*, **81**, 27-52.
- Oliphant, A.J., Sturman A. P. and Tapper N. J., 2001: The evolution and structure of a tropical island sea/land breeze system, northern Australia. *Meteorology and Atmospheric Physics*, **78**, 45-59.
- Pryor, S.C., Barthelmie, R.J., Carreiro, M., Davis, M.L., Hartley, A.E., Jensen, B., Oliphant, A.J., Randolph, J. C. and Schoof, J. T., 2001: Nitrogen Deposition to and Cycling in a Deciduous Forest. *The Scientific World*, **1**(S2), 245-254.

### **Book chapters and other publications**

- Cotton, C, Elswick, E,R, and Oliphant, A.J. (Eds) 2011: *Introductory Field Experience in Environmental Science: Field manual for G329*, Indiana University Press, 2011



Murthy, V.R.K, Milford, J., Stigter, K. Orlandini, S., Oliphant, A.J., Grant, R and Wieringa, J. 2010: Agricultural Meteorological Elements and their Observations, Chapter 2 in *Guide to Agricultural Meteorological Practices*, 2010 Ed., World Meteorological Organization (WMO-No.134).

### **Published Conference Proceedings**

- Oliphant, A.J., Rose III, J.W., Grimmond, C.S.B. and Schmid, H.-P. 2006: Observations of Canopy Light Penetration and Net Ecosystem Exchange of CO<sub>2</sub> under different sky conditions in a Mid-Western Mixed Deciduous Forest, *Proceedings of 27<sup>th</sup> Conference on Agricultural and Forest Meteorology, American Meteorological Society*, **5.7**, San Diego, May 2006.
- Zawar-Reza, P., Sturman, A.P., Oliphant, A.J., Spronken-Smith, R. A., 2003: Evaluating the potential for regional scale coast-to-basin transport of air pollution: Validation of a mesoscale model in complex terrain. *Proceedings of the National Clean Air Conference*, Newcastle, Australia, Nov 23-27, 2003.
- Oliphant, A. J., Schmid, H. P., Grimmond, C. S. B., Su, H.-B., Scott, S. and Vogel, C., 2002: The role of cloud cover in net ecosystem exchange of CO<sub>2</sub> over two mid-western mixed hardwood forests. *Proceedings of 25<sup>th</sup> Conference on Agricultural and Forest Meteorology, American Meteorological Society*, Norfolk, VA, May 2002.
- Ciasto, L, Oliphant, A. J., Grimmond, C. S. B., Corbin, K., and Schmid, H. P., 2002: Small-scale spatial variability of soil moisture in a mid-latitude deciduous forest. *Proceedings of 25<sup>th</sup> Conference on Agricultural and Forest Meteorology, American Meteorological Society*, Norfolk, VA, May 2002.
- Ciasto, L. Oliphant, A. J., Grimmond, C. S. B., Zutter, H. N., Su, H. B. and Schmid, H. P., 2002: Evaluation of a simple method to estimate surface heat fluxes for a deciduous forest, USA. *Proceedings of 25<sup>th</sup> Conference on Agricultural and Forest Meteorology, American Meteorological Society*, Norfolk, VA, May 2002.
- Zutter, H. N., Grimmond, C. S. B., Oliphant, A. J., Schmid, H. P., Su, H. B., Ciasto, L., 2002: Convective boundary layer development over a midlatitude deciduous forest. *Proceedings of 25<sup>th</sup> Conference on Agricultural and Forest Meteorology, American Meteorological Society*, Norfolk, VA, May 2002.
- Schmid, H. P., Wayson, C. A., Oliphant, A. J. and Randolph, J. C., 2002: An assessment of the spatial variability of biophysical factors near a CO<sub>2</sub> flux tower in a deciduous forest and its influence on annual estimates of net ecosystem exchange. *Proceedings of 25<sup>th</sup> Conference on Agricultural and Forest Meteorology, American Meteorological Society*, Norfolk, VA, May 2002.
- Su, H-B., Schmid, H. P., Grimmond C. S. B., Vogel, C. and Oliphant, A.J., 2002: Spectral analyses of long-term measurements of turbulent exchange over two mixed hardwood forests. *Proceedings of 25<sup>th</sup> Conference on Agricultural and Forest Meteorology, American Meteorological Society*, Norfolk, VA, May 2002.
- Oliphant, A.J., Sturman, A.P. and Spronken-Smith, R.A. 2000: Spatial heterogeneity of surface energy exchange in an alpine catchment. *Proceedings of: 14<sup>th</sup> Symposium on Boundary Layer and Turbulence, American Meteorological Society*, 463-464.
- Kossmann, M., Sturman, A.P., Zawar-Reza, P., McGowan, H.A, Oliphant, A.J., Owens, I.F. and Spronken-Smith, R.A., 2000: Analysis of the wind and temperature field in an alpine lake basin. *Proceedings of: Ninth conference on Mountain Meteorology, American Meteorological Society*, 312-314.

Oliphant, A.J., Sturman, A.P. and Spronken-Smith, R.A. 2000: Spatial heterogeneity of surface energy exchange in an alpine catchment. *Proceedings of: Ninth conference on Mountain Meteorology, American Meteorological Society*, 314-315.

### Conference Presentations

- Oliphant, A.J., Schwendenmann L., Weissert, L., Salmond, J. 2020. Biogenic controls on CO<sub>2</sub> fluxes in a suburban neighborhood. *OzFlux 20-year Anniversary Meeting*, July 2020, remote conference.
- Mousavi, S.\* , Oliphant A.J., Baguskas, S.A., Simonin, K.A. 2019. Observations of Ecosystem CO<sub>2</sub> Exchanges in a Montane Meadow in Northern Sierra Nevada, California, Poster EP51E-2149, *American Geophysical Union Fall Meeting*, San Francisco, CA.
- Simonin K.A., Baguskas, S.A., Oliphant, A.J., Davis, J.D., Nanus, L., Blesius, L., Physioc, K.\* , LeBeau, R.\* , Mousavi, S\* , Studwell, A., Clark, Q. 2019. Montane Meadow Restoration: Quantifying the Impact of Biogeomorphic Change on Ecosystem Function, Poster EP51E-2145, *American Geophysical Union Fall Meeting*, San Francisco, CA.
- Hann, R.N.\* , Oliphant, A.J., Baguskas, S.A. 2019. Investigations of the internal variability in the urban heat island in San Jose, California, Poster CG21H, *American Geophysical Union Fall Meeting*, San Francisco, CA
- Oliphant, A.J., Meier, C, Thorp, R. and Lavendar, S. Energy, Water and Carbon Budgets of a Living Roof in San Francisco, California, *10<sup>th</sup> International Conference on Urban Climate*, New York, New York, August 2018.
- Oliphant, A.J. & Stoy, P. An Evaluation of Semi-Empirical Models for Partitioning Photosynthetically Active Radiation into Diffuse and Direct Beam Components. *American Meteorological Society's 33rd Conference on Agricultural and Forest Meteorology*, Boise, ID, May, 2018.
- Oliphant, A.J., Bradford, D.A., Maher, S. & Mousavi, S. Investigation of carbon cycling in Sierra Nevada meadow ecosystems. *American Association of Geographers Annual Meeting*, New Orleans, LA, April 2018.
- Blackburn D.A. and Oliphant, A.J. 2017: Investigation of carbon and water fluxes in a Sierra Nevada meadow. *American Association of Geographers Annual Meeting*, San Francisco, California, April 2017.
- Blackburn D.A. and Oliphant, A.J. 2016: Micrometeorological Observations in a Sierra Nevada Meadow. *American Geophysical Union Annual Meeting*, San Francisco, California, Dec 2016.
- Fernandez, D., Torregrosa, A., Weiss-Penzias, P.S., Oliphant, A.J., Dodge, C., Bowman, M., Wilson, S., Mairs, A.A., Gravelle, M., Barkley, T. 2016: Mesh Intercomparisons of Fog Water Collected Yield Insight into the Nature of Fog-Drip Collection Mechanisms. *American Geophysical Union Annual Meeting*, San Francisco, California, Dec 2016.
- Oliphant A.J. and Baguskas, S.A. 2016: Impacts of Advection Fog on the Surface Radiation Budget in coastal California. *American Geophysical Union Annual Meeting*, San Francisco, California, Dec 2016.
- Baguskas, S. A., Oliphant A.J. and Loik, M. E. Impact of coastal fog on the energy and water balance of a California agricultural system. *American Geophysical Union Annual Meeting*, San Francisco, California, Dec 2016.
- Weiss-Penzias, P., Coale, K. Heim, W., Fernandez, D., Oliphant, A.J., Dodge, C., Hoskins, D., Sorooshian, A. and Olson, A., Chiswell, H., Moranville, R., Till. C 2016: Total mercury and

- monomethylmercury in coastal California cloud and fog water: Results of sampling on land, air, and at sea. *National Atmospheric Deposition Program Conference*, Santa Fe, New Mexico, October 2016.
- Oliphant, A.J. Lavendar, S. and Thorp, R. Micrometeorological observations of a living roof in San Francisco, California, *American Association of Geographers Annual Meeting*, San Francisco, CA, April 2016.
- Meyer, C. and Oliphant, A.J., 2016: Investigation of the Carbon Dioxide Exchange on a Living Roof in San Francisco. *American Association of Geographers Annual Meeting*, San Francisco, CA, April 2016.
- Pisek, J., L. He, J. M. Chen, A. Govind, M. Sprintsin, Y. Ryu, S. K. Arndt, D. Hocking, T. Wardlaw, J. Kuusk, A. J. Oliphant, L. Korhonen, H. Fang, G. Matteucci, B. Longdoz and K. Raabe, 2015: Characterization, Validation and Intercomparison of Clumping Index Maps from POLDER, MODIS, and MISR Satellite Data Over Reference Sites, *American Geophysical Union Annual Meeting*, San Francisco, California, Dec 2015, B43C-0572.
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- Brant, G., Oliphant, A.J. and Blesius, L. 2008: Impacts of coastal advection fog on the surface radiation regime, *American Geophysical Union Fall Meeting*, San Francisco, California, December 2008.

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Kossmann, M., Sturman, A.P., Zawar-Reza, P., McGowan, H.A., Bradley, S.G., Oliphant, A.J. and Hipkin, V.J., 2000: Boundary layer development and local winds in an alpine lake basin. *Conference of New Zealand Meteorological Society*. Christchurch, New Zealand, November, 2000.

Oliphant, A.J., Schmid, H.P., Grimmond, C.S.B and Su, H-B. 2000 Carbon budget estimates and research foci of the Morgan-Monroe State Forest flux site. *AmeriFlux Annual Meeting*, Atlanta Georgia, October, 2000.

Oliphant, A.J., Sturman, A.P. and Spronken-Smith, R. A. 1999: Spatial controls on surface energy exchanges in an alpine catchment. *Joint Conference on Natural Hazards and Climate Change*, Meteorological Society of New Zealand and New Zealand Geophysical Society, Wellington, New Zealand, August, 1999.

Oliphant, A.J. and Sturman, A.P. 1998: The sea/land breeze system over the Tiwi Islands, Northern Australia. *Joint Annual Conference of the New Zealand Meteorological Society and New Zealand Hydrological Society*, Dunedin, New Zealand, November 1998.

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Sturman, A.P., Oliphant, A.J. and Tapper, N.J. 1998: The sea land breeze system over the Tiwi Islands, Northern Australia. *Institute of Australian Geographers Annual Conference*, Fremantle, Australia, June 1998.

Sturman, A.P., Oliphant, A.J. and Tapper, N.J. 1997: The interaction of a tropical sea/land breeze system with thunderstorm development. *Joint conference of the International Association for the Physical Sciences of the Oceans (IAMAS/IAPSO)*, Melbourne, Australia, June, 1997.

### **Book reviews**

Oliphant, A.J. 1998. Book review; Windows on Meteorology: Australian Perspective. *New Zealand Geographer*, 54(2), 51-52.

### **Teaching**

**Undergraduate courses taught:** Geog101: The Physical Environment, Geog314: Bioclimatology, Geog314: Boundary Layer Climates, Geog313: Earth's Climate System, Geog402: The Climatic Challenge, Geog500: Physical and human dimensions of climate change, Geog602: Field Methods

in Physical Geography, Geog690: Proseminar in Geography, Metr470: Meteorological and Oceanic Observation and Monitoring Systems.

**Graduate courses taught:** Geog810: Graduate seminar in Climatology, Geog702: Field Methods in Physical Geography, Geog896 Special Topics.

**Graduate thesis supervision:**

(1) Completed theses as principal adviser:

Darren Blackburn (2017): *Investigations of Carbon and Water Fluxes in a Sierra Nevada Meadow*

Christa Meier (2016): *Investigations of ecosystem CO<sub>2</sub> exchanges on a living roof, San Francisco, California*

Suzanne Maher (2015): *Bio-micrometeorology of a Sierra Nevada montane meadow*

Pamela van der Leeden (2015): *Variability in sea surface temperature over the Cordell Bank area*

Siobhan Lavendar (2015): *Estimates of surface carbon, water and energy budgets on a living roof*

Garrett Bradford (2014): *Investigations of surface roughness length modification in Black Rock City, NV*

Stephanie Cowles (2013): *Investigations of the Park Cool Island Effect in Golden Gate Park, San Francisco.*

Carlos Jennings (2013): *Using MODIS AOD to detect surface concentrations of pm2.5 in the Bay Area*

Joshua Schnabel (2007): *Mapping toxic air pollution concentrations at the community scale*

Charles Brigham (2006): *Structure and dynamics of spatial rainfall patterns in San Francisco, California.*

(2) In progress theses as principal adviser:

Charles Swanson: *A predictive model for aeolian erosion in the southern San Joaquin Valley, California*

Will Rose: *Atmospheric scattering and light transmission in a deciduous forest canopy*

Heba Petursson: *Assessing wind energy potential in Iceland*

(3) Completed theses as second adviser:

Michelle Slocomb (2013): *Stream channel development in restored Sierra Nevada meadows*

Marilyn Hope-Smulyan (2012): *An assessment of step-pool urban stream restoration: San Pedro Creek, Pacifica, California*

Jeanne Depman (2009): *Examining an urban water source: groundwater characteristics of San Francisco's lobos creek*

Ingrid Overguard (2009): *From empty space to global commons: Perception and mitigation of ocean noise pollution*

Noah Wasserman (2009): *Vegetation change trends in Yosemite National Park over the last century (1903-2008)*

Arnold Thompson (2007): *Hydrogeomorphic differences beneath Eucalyptus and Californian Oak trees*

Jim Pettigrew (2005): *Removal and nutrient analysis of invasive green crabs in Tomales Bay, California*

Stephanie Simms (2004): *Sediment source analysis for the San Pedro Creek Watershed, California*

Suzy Jones (2003) *Current uses of Lake Merced, San Francisco California*