

Curriculum Vitae
2 January 2018

DAVID S. BATTISTI
Dept. of Atmospheric Sciences 351640
University of Washington
Seattle WA 98195-1640
(206) 543-2019
www.atmos.washington.edu/~david

EDUCATION

- 1988 Ph.D., Department of Atmospheric Sciences, University of Washington, Seattle WA.
Dissertation title: Dynamics and Thermodynamics of Interannual Variability in the
Tropical Atmosphere/Ocean System.
- 1981 M.S., Department of Oceanography, University of Washington, Seattle WA.
- 1978 B.S., Department of Physics, University of Massachusetts, Amherst, MA. Cum Laude.

EMPLOYMENT

- 2015 – present Professor II, Department of Geophysics, University of Bergen
- 2014 – 2016 Carnegie Centennial Professor of Scotland
- 2007 – 2012 Professor II, Department of Geophysics, University of Bergen
- 2007 – present Fellow, Food Security Institute, Stanford University
- 2006 – present Tamaki Chair of Atmospheric Sciences
- 2006 – present Adjunct Faculty, Dept. of Earth and Space Physics, Univ. of Washington
- 2003 – 2006 Director, Earth Initiative, University of Washington
- 2003 – 2006 Tamaki Professor of Atmospheric Sciences
- 2003 – 2006 Associate Vice Provost, Office of Research
- 2000 – present Professor, Dept, of Atmospheric Sciences, Univ. of Washington, Seattle WA.
- 1997 - 2003 Director, Joint Study of the Atmosphere and Oceans (JISAO), University of
Washington, Seattle, WA
- 1996 – present Senior Fellow, JISAO, University of Washington, Seattle, WA
- 1995 – 2000 Associate Professor, Dept. of Atmospheric Sciences, U. of Washington, Seattle.
- 1991 – 1995 Fellow, JISAO, University of Washington, Seattle, WA
- 1990 – 1995 Assistant Professor, Dept. of Atmos. Sci., University of Washington, Seattle
WA.
- 1989 – 1990 Assistant Professor, Dept. of Meteorology, Univ. of Wisconsin, Madison WI.
- 1989 – 1990 JISAO Summer Visitor, University of Washington, Seattle, WA.
- 1988 Research Associate (postdoctorate), University of Washington, Seattle, WA.

PUBLICATIONS (all publications are refereed)

- 2018 White, R.H., D.S. Battisti, and A. Sheshadri: [Orographic impacts on boreal winter stratospheric circulation: Mongolian mountains matter most.](#) Submitted, GRL, Jan.
- 2018 Atwood, A.R., D.S. Battisti, C.M. Bitz, and Julian P. Sachs: [Response of the tropical Pacific to abrupt climate change 8,200 years ago.](#) Submitted, Nature Geosciences, Jan.
- 2017 Kohyama, T., D.L. Hartmann, and D.S. Battisti: Weakening of nonlinear ENSO under global warming. Submitted, Nature Climate Change. October.

- 2017 Tigchelaar, M., D.S. Battisti, R.L. Naylor, and D.K. Ray: [Future warming increases global maize variability with implications for food security](#). Submitted, PNAS, Oct.
- 2017 Wills, Robert C., T. Schneider, J.M. Wallace, D.S. Battisti, and D.L. Hartmann: [Disentangling global warming, multi-decadal internal variability, and El Nino in Pacific temperatures](#). Accepted nad revised, GRL, Dec.
- 2017 Wills, Robert C., D.S. Battisti, D.L. Hartmann, and T. Schneider: [Extracting modes of variability and change from climate model ensembles](#). Climate Informatics.
- 2017 White, R.H., D.S. Battisti, and G. Skok: [Precipitation events tracked in time and space in gridded observational data](#). GRL, 10.1002/2017GL074011.
- 2017 Haugstad, A.D., K.C. Armour, D.S. Battisti, and B.E.J. Rose: [Relative roles of surface temperature and climate forcing patterns in the inconstancy of radiative feedbacks](#). GRL, DOI:10.1002/2017GL074372.
- 2017 Liu, X., D.S. Battisti, and G.H. Roe: [The Effect of Cloud Cover on the Meridional Heat Transport: Insights from Varying Rotation Rate Experiments](#) J. Climate, 30, 7465-79.
- 2017 Ding, Q., A. Schweiger, M.L'Heureux, D.S. Battisti, N.C. Johnson, E.B. Wigglesworth, Q. Zhang, K. Harnos, R. Eastman, and E.J. Steig: Influence of the recent high-latitude atmospheric circulation change on summertime Arctic sea ice. Nature Climate Change, DOI: 10.1038/NCLIMATE3241
- 2017 Kohyama, T., D.L. Hartmann, and D.S. Battisti: [La Nina-like mean-state response to global warming and potential oceanic roles](#). J. Climate, 30, 4207-25. DOI 10.1175/JCLI-D-16-0441.1
- 2017 White, R.H., D.S. Battisti, and G.H. Roe: [Mongolian Mountains Matter Most: impacts of the latitude and height of Asian orography on Pacific wintertime atmospheric circulation](#). J. Climate, 30, 4065-82. doi.org/10.1175/JCLI-D-16-0401.1
- 2017 Liu, X., D.S. Battisti, and A.D. Donohoe: [Tropical precipitation and cross-equatorial ocean heat transport during the mid-Holocene](#). J. Climate, 30, 3529-47. DOI: 10.1175/JCLI-D-16-0502.1
- 2016 Atwood, A.R., D.S. Battisti, A.T. Wittenberg, W.H.G. Roberts, and D.J. Vimont: [Characterizing unforced multi-decadal variability of ENSO: A case study with the GFDL CM2.1 coupled GCM](#). Climate Dynamics, 10.1007/s00382-016-3477-9.
- 2016 Pausata, F.S.R., C. Karamperidou, R. Caballero, and D.S. Battisti: [ENSO response to high-latitude volcanic eruptions: the role of the initial conditions](#). Geophys. Res. Letts., July. DOI: 10.1002/2016GL069575

- 2016 Roe, G.H., Q. Ding, D.S. Battisti, P. Molnar, M.K. Clark, and C.N. Garzzone: [The response of Asian summertime climate to the largest geologic forcing of the past 50 Ma.](#) *J. Geophys. Res., Atmos.*, DOI: 10.1002/2015JD024370.
- 2016 Atwood, A.R., E. Wu, D.M.W. Frierson, D.S. Battisti and J.P. Sachs: [Quantifying climate forcings and feedbacks over the last millennium in the CMIP5/PMIP3.](#) *J. Climate*, **29**, 1161-78.
- 2015 McCusker, K.E., D.S. Battisti and C.M. Bitz: [Stratospheric sulfate aerosol injections cannot preserve the West Antarctic Ice Sheet.](#) *Geophys. Res. Letts*, doi 10.1002/2015GL064314.
- 2015 Pausata, F. S.R., L. Chafik, R. Caballero, and D.S. Battisti: High-latitude volcanic eruption impacts on ENSO. *Proc. Nat. Acad. Sciences*, October 26, 2015, doi: 10.1073/pnas.1509153112.
- 2015 Liu, X. and D.S. Battisti: [The Influence of Orbital Forcing of Tropical Insolation on the Climate and Isotopic Composition of Precipitation in South America.](#) *J. Climate*, **28**, 4841-4862.
- 2015 Maroon, E.A., D.M.W Frierson, and D.S. Battisti: The tropical precipitation response to Andes topography and ocean heat fluxes in an aquaplanet model. *J. Climate*, **28**, 381-399.
- 2014 Donohoe, A.D., K.C. Armour, A.G. Pendergrass, and D.S. Battisti: Shortwave and longwave radiative contributions to global warming under increasing CO₂. *Proc. Nat. Acad. Sci.* doi:10.1073/pnas.1412190111
- 2014 Battisti, D.S., Q. Ding and G.H. Roe: [Coherent pan-Asian climate and isotopic response to precessional forcing.](#) *J. Geophys. Res. Atmos.*, **119**, No. 21, pp 11,997-12,020. DOI: 10.1002/2014JD021960
- 2014 Donohoe, A., D. Frierson and D.S. Battisti: [The effect of ocean mixed layer depth on climate in a slab ocean aquaplanet experiments.](#) *Climate Dynamics*, **43**, 1041-55.
- 2014 Baker, P.A., S.A. Fritz, C.W. Dick, A.J. Eckert, B.K. Horton, S. Manzoni, C.C. Ribas, C.N. Garzzone, D.S. Battisti: [The emerging field of geogenomics: constraining geological problems with genetic data.](#) *Earth-Science Reviews*, **135**, 38-47.
- 2014 Singh, H.A., D.S. Battisti, and C.M. Bitz: [A Heuristic Model of the Dansgaard-Oeschger Cycles: Description, Results, and Sensitivity Studies: Part I.](#) *J. Climate*, **27**, 4337-58.
- 2014 Ding, Q., J.M. Wallace, D.S. Battisti, E.J. Steig, A.J.E. Gallant, H.J. Kim and L. Geng: [Tropical forcing of the recent rapid Arctic warming in northeastern Canada and Greenland.](#) *Nature*, **509**, pp 209-12, doi:10.1038/nature13260.
- 2014 Rose, B.E.J., K.C. Armour, D.S. Battisti, N. Feldl and D.D.B. Koll [The dependence of](#)

[transient climate sensitivity and radiative feedbacks on the spatial pattern of ocean heat uptake](#). *Geo. Res. Letts.*, 41, doi:10.1002/2013GL058955.

- 2014 Roberts, W.H.G., D.S. Battisti and A.W. Tudhope: [ENSO in the mid-Holocene according to CSM and HadCM3](#). *J. Climate*, **27**, 1223-42.
- 2014 McCusker, K.E., K.C. Armour, C.M. Bitz, and D.S. Battisti: [Rapid and extensive warming following cessation of solar management](#). *Environmental and Planetary Science Research Letters*, **9**, 024005. doi:10.1088/1748-9326/9/2/024005
- 2014 Steiger, N.J., G.J. Hakim, E.J. Steig, D.S. Battisti, and G.H. Roe: [Assimilation of time-averaged pseudoproxies for climate reconstruction](#). *J. Climate*, **27**, 426-441
- 2013 Penny, S., D.S. Battisti and G.H. Roe: Examining mechanism of variability within the Pacific storm track: upstream seeding and jet-core strength. *J. Climate*, **26**, 5242-5259.
- 2013 Frierson, D.M.W., Y.-T. Hwang, N.S. Fuckar, R. Seager, S. Kang, A. Donohoe, E.A. Maroon, X. Liu, and D.S. Battisti: Why tropical rain peaks in the Northern Hemisphere: the role of the ocean conveyor belt. *Nature*, Oct 20, doi 10.1038/geo1987.
- 2013 Dokken, T.M., K.H. Nisangcioglu, C. Li, D.S. Battisti, and C. Kissel. [Dansgaard-Oeschger cycles: interactions between ocean and sea ice intrinsic to the Nordic Seas](#). *Paaleoceanography*, **28**, 491-502, doi:10.1002/palo.20042.
- 2013 Donohoe, A. and D.S. Battisti: [The seasonal cycle of atmospheric heating and temperature](#). *J. Climate*, **26**, 4962-80.
- 2012 Kuttel, M., E.J. Steig, Q. Ding, A.J. Monaghan, and D.S. Battisti: [Seasonal climate information preserved in West Antarctic ice core water isotopes: relationships to temperature, large-scale circulation, and sea ice](#). *Climate Dynamics*, **39**, 1841-57.
- 2012 Ding, Q., E.J. Steig, D.S. Battisti and J.M. Wallace: [Influence of the tropics on the Southern Annular Mode](#). *J. Climate*, **25**, 6330-48.
- 2012 Donohoe, A. and D.S. Battisti: [What determines meridional heat transport in climate models?](#) *J. Climate*, **25**, 3832-50.
- 2012 McCusker, K.E., D.S. Battisti, and C.M. Bitz: [The climate response to stratospheric sulfate injections and implications for addressing climate emergencies](#). *J. Climate*, **25**, 3096-3116
- 2012 Steig, E.J., Q. Ding, D.S. Battisti, and A. Jenkins: [Tropical forcing of Circumpolar Deep Water Inflow and outlet glacier thinning in the Amundsen Sea Embayment, West Antarctica](#). *Annals of Glaciology*, **53**, 19-28. doi: 10.3189/2012AoG60A110

- 2012 Schoups, G., L. Addams, D.S. Battisti, E. McCullough, and J.L. Minjares., "[Water Resources Management in the Yaqui Valley](#)" In ""Seeds of Sustainability: Lessons from the Birthplace of the Green Revolution in Agriculture." Ed. P.A. Matson. Island Press. ISBN: 9781597265256
- 2012 Nicholas, R.E., D.S. Battisti: "[Empirical Downscaling of High-Resolution Regional Precipitation From Large-Scale Reanalysis Fields](#)" *J. Applied Meteorology and Climatology*, **51**, 100-114.
- 2012 Pendergrass, A.G., and G.J. Hakim, D.S. Battisti and G. Roe: "[Coupled air-mixed-layer temperature predictability for climate reconstruction](#)." *J. Climate*, **25**, 459-72.
- 2011 Eisenman, I. T. Schneider, D.S. Battisti and C.M. Bitz: "[Consistent changes in the sea ice seasonal cycle in response to global warming](#)." *J. Climate*, **24**, 5325-5335.
- 2011 Pausata, F., D.S. Battisti, K.H. Nisancioglu and C.M. Bitz: Chinese stalagmites: proxies for the Indian monsoon response to an archetypal Heinrich event. *Nature Geosciences*, 19 June, doi:10.1038/ngeo1169. See also, News and Views by Kathleen Johnson, *Nature Geosciences*, 19 June, doi:10.1038/ngeo1190.
- 2011 Penny, S., D.S. Battisti and G. Roe: Reply to "Comments on The source of the mid-winter suppression of the Pacific storm track", by Penny et al.". *J. Climate*, **24**, 5192-5194. Doi:10.1175/2011JCLI4187.1
- 2011 Ding, Q., E.J. Steig, D.S. Battisti and M Kuettel: "[Recent West Antarctica warming caused by central tropical Pacific warming](#)." *Nature Geosciences*, **4**, DOI: 10.1038/NNGEO1129.
- 2011 Donohoe, A. and D.S. Battisti: Atmospheric and surface contributions to planetary albedo. *J. Climate*, **24**, 4402-4418. Doi: 10.1175/2011JCLI3946.1
- 2011 Solomon, S. and fourteen others: Climate Stabilization Targets: Emissions, Concentrations and Impacts over Decades to Millennia. National Research Council, National Academy of Sciences. Pp 298.
- 2011 Roberts, W.G.H. and D.S. Battisti: A new tool for evaluating the physics of coupled atmosphere-ocean variability in nature and in General Circulation Models. *Climate Dynamics*, **36**, 907-923, DOI: 10.1007/s00382-010-0762-x.
- 2010 Li, C., D.S. Battisti and C. Bitz: Can North Atlantic sea ice anomalies account for Dansgaard-Oeschger climate signals? *J. Climate*, **23**, 5457-75.
- 2010 Dayem, K.E., P. Molnar, D.S. Battisti, and G.H. Roe: Lessons learned from the modern monsoon applied to interpretation of paleoclimate records. *Earth and Planetary Science Letters*, **295**, 219-230.

- 2010 Fedoroff, N.V., D.S. Battisti, R.N. Beachy, P. Cooper, D.A. Fischhoff, C.N. Hodges, V. Knauf, D. Lobell, B.J. Mazur, D. Molden, M.P. Reynolds, P.C. Ronald, M.W. Rosegrant, P.A. Sanchez, A. Vonshak, and J.-K. Zhu. Radically Rethinking Agriculture for the 21st Century. *Science*, **327**, 833-4.
- 2010 Molnar, P, W.R. Boos, and D.S. Battisti: Orographic Controls on Climate and Paleoclimate of Asia: Thermal and Mechanical Roles for the Tibetan Plateau. *Annual Reviews of Earth and Planetary Sciences*, Vol **38**, 77-102.
- 2010 Penny, S., G.H. Roe, and D.S. Battisti: The source of the mid-winter suppression of the Pacific storm track. *J. Climate*, **23**, 634-48.
- 2009 Deng, X., J. Huang, F. Qiao, R.L. Naylor, W.P. Falcon, M. Burke, S. Rozelle, and D.S. Battisti: Impacts of El Nino-Southern Oscillation (ENSO) Events on China's Rice Production. *Journal of Geographical Sciences*, **20**, 3-16.
- 2009 Vimont, D.J., D.S. Battisti, and R.L. Naylor: Downscaling Indonesian precipitation using large-scale meteorological fields. *International Journal of Climatology*, DOI 10.1002/joc.2010.
- 2009 Donohoe, A. and D.S. Battisti The amplitude asymmetry between synoptic cyclone and anticyclone amplitudes: implications for filtering methods in feature tracking. *Mon. Wea. Rev.*, **137**, 3874-87.
- 2009 Donohoe, A. and D.S. Battisti: Causes of Reduced North Atlantic Storm Activity in a CCSM3 Simulation of the Last Glacial Maximum. *J. Climate*, **22**, 4793-4808.
- 2009 Pausata, F.S.R., C. Li, J.J. Wettstein, K.H. Nisancioglu, and D.S. Battisti: Changes in atmospheric variability in a glacial climate and the impacts on proxy data: a model intercomparison. *Climate of the Past*, **5**, 489-502.
- 2009 Sachs, J.P., D. Sachse, Z. Zhang, R.H. Smittenberg, D.S. Battisti, and S. Golubic: Near-equator position of the Intertropical Convergence Zone during the Littel Ice Age. *Nature Geosciences*, 28 June.
- 2009 Battisti, D.S. and R.L. Naylor: Historical Warnings of Future Food Insecurity with Unprecedented Seasonal Heat. *Science*, **323**, no 5911, 240-4.
- 2009 Blackstock, J.J, D.S. Battisti, K. Caleira, D.M. Eardley, J.I.Katz, D.W. Keith, A.A.N. Patrinos, D.P. Schrag, R.H. Socolow, and S.E. Koonin: Climate engineering response to climate emergencies. *Novim*.
- 2008 Li C. and D.S. Battisti: Reduced Atlantic storminess during the Last Glacial Maximum: Evidence from a coupled climate model. *J. Climate*, **21**, 3561-79.

- 2008 Nicholas, R. and D.S. Battisti: Drought Recurrence and Seasonal Rainfall Prediction in the Rio Yaqui Basin, Mexico. *J. App. Meteor. Hydro.*, **47**, 991-1005.
- 2007 Naylor, R.L, D.S. Battisti, D.J. Vimont, W.P. Falcon and M.B. Burke: Assessing Risks of Climate Variability and Climate Change on Indonesian Rice Agriculture. *Proc. Nat. Acad. Sci.*, **104**, 7752-7.
- 2007 Takahashi, K. and D.S. Battisti: Processes controlling the mean tropical Pacific Precipitation Pattern: II. The South Pacific Convergence Zone and the southeast Pacific dry zone. *J. Climate*, **20**, 5696-5702.
- 2007 Seager, R., and D.S. Battisti: Challenges to our understanding of the general circulation: abrupt climate change. In "The Global Circulation of the Atmosphere" (eds. Schneider and Sobel). Pg 331-71. Princeton University Press.
- 2007 Takahashi, K. and D.S. Battisti: Processes controlling the mean tropical Pacific Precipitation Pattern: I. The Andes and the Eastern Pacific ITCZ. *J. Climate*. **20**, 3434-51.
- 2005 Biasutti, M., D. S. Battisti and E.S. Sarachik: Terrestrial influence on the annual cycle of the Atlantic ITCZ in an AGCM coupled to a slab ocean. *J. Climate*, **18**, 211-28.
- 2005 Li, C., D.S. Battisti, D.P. Schrag, E. Tziperman: Abrupt climate shifts in Greenland due to displacement of the sea ice edge. *Geophysical Research Letters*, **32**, L19702, doi:10.1029/2005GL023492.
- 2004 Yin, J.H. and D.S. Battisti: Why do baroclinic waves tilt poleward with height? *J. Atmos. Sci.*, **61**, 1454-60.
- 2004 Morss, R. and D.S. Battisti: "Evaluating observing system requirements for ENSO prediction: Experiments with an intermediate coupled model". *J. Climate*, **17**, 3057-73.
- 2004 Morss, R. and D.S. Battisti: "Designing efficient observing networks for ENSO prediction". *J. Climate*, **17**, 3074-89.
- 2004 Biasutti, M., D. S. Battisti and E.S. Sarachik: Mechanisms Controlling the Annual Cycle of Precipitation in the Tropical Atlantic Sector in an Atmospheric GCM". *J. Climate* **17**, 4708-23.
- 2003 Vimont, D. J., D. S. Battisti and A.C. Hirst: Seasonal footprinting mechanism in the CSIRO general circulation model. *J. Climate*, **16**, 2653-67.
- 2003 Vimont, D. J., J.M. Wallace and D. S. Battisti: Seasonal footprinting in the Pacific: Implications for ENSO. *J. Climate*. **16**, 2668-75.

- 2003 Biasutti, M., D.S. Battisti and E.S. Sarachik: On the annual cycle in the tropical Atlantic, South America and Africa. *J. Climate*, **16**, 2491-2508.
- 2003 Chiang, J.C.H., M. Biasutti, and D.S. Battisti: Sensitivity of the Atlantic ITCZ to Last Glacial Maximum boundary conditions. *Paleoceanography*. **18**, 18-1-18
- 2002 Vimont, D., D.S. Battisti, and A.C. Hirst: Pacific Interannual and Interdecadal Equatorial Variability in a 1000 year simulation of the CSIRO coupled General Circulation Model. *J. Climate*, **15**, 160-78.
- 2002 Seager, R., D.S. Battisti, J. Yin, N. Naik, N. Gordon, A.C. Clement and M. Cane: Is the Gulf Stream responsible for Europe's mild winters? *Q. Jour. Roy. Met. Soc.*, **128**, 2563-86.
- 2001 Yin, J. H. and D.S. Battisti: The importance of tropical sea surface temperature patterns in simulations of Last Glacial Maximum climate. *J. Climate*, **14**, 565-81.
- 2001 Thompson, C. and D.S. Battisti: "A Linear, Stochastic Model of El Nino/Southern Oscillation. Part II: Analysis." *J. Climate*, **14**, 445-66.
- 2001 Wu, Zhaohua, E.S. Sarachik, and D. S. Battisti: Thermally driven tropical circulations under Rayleigh friction and Newtonian cooling: Analytic Solutions. *J. Atmos. Sci.*, **58**, 724-741.
- 2001 Marshall, J., Y. Kushnir, D. Battisti, P. Chang, J. Hurrell, and M. Visbeck: "Atlantic Climate Variability". *Int. J. Climatology*, **21**, 1863-98.
- 2001 Vimont, D.J., D.S. Battisti and A.C. Hirst: Footprinting: A seasonal connection between tropics and mid-latitudes. *Geophys. Res. Letts.*, **28**, 3923-6.
- 2000 Johnson, S.D., D.S. Battisti, and E.S. Sarachik: "Empirically derived Markov models and prediction of tropical sea surface temperature anomalies." *J. Climate*, **13**, 3-17.
- 2000 Wu, Xhaohua, E. S. Sarachik, and D.S. Battisti: "The vertical structure of convective heating and the 3D structure of the forced circulation in the troposphere" *J. Atmos. Sci.*, **57**, 2169-2187.
- 2000 Dettinger, M.D., D.S. Battisti, G.M. McCabe, and R.D. Garreaud: "Interhemispheric effects of interannual and decadal ENSO-like climate variations on the Americas." In "Present and Past Inter-hemispheric climate linkages in the Americas and their Societal Effects. Ed., V. Markgraf. Academic Press.
- 2000 Wu, Xhaohua, D. S. Battisti, and E. S. Sarachik: "Rayleigh Friction, Newtonian Cooling, and the Linear Response to Steady Tropical Heating". *J. Atmos. Sci.* **57**, 1937-1957.

- 2000 Thompson, C.J., and D.S. Battisti: A Linear Stochastic Dynamical Model of ENSO. Part I: Development. *J. Climate*, **13**, 2818-83.
- 2000 Johnson, S.D., D.S. Battisti, and E.S. Sarachik: Seasonality in an empirically derived Markov model of tropical Pacific sea surface temperature anomalies. *J. Climate*, **13**, 3327-35.
- 2000 Bretherton, C. S. and D. S. Battisti: An interpretation of the results from atmospheric general circulation models forced by the time history of the observed sea surface temperature distribution. *Geophys. Res. Lett.* **27**,767-70.
- 1999 Wu, Zhaohua, E. S. Sarachik, and D.S. Battisti: "Thermally forced surface winds on an equatorial beta-plane." *J. Atmos. Sci.*, **56**, 2029-37.
- 1999 Garreaud, R. and D.S. Battisti: "Interannual ENSO to decadal ENSO-like variability in the Southern Hemisphere tropospheric circulation." *J. Climate*, **12**, 2113-2123.
- 1999 Battisti, D. S., E. S. Sarachik and A. C. Hirst: "A Consistent Model for the Large Scale Steady Surface Atmospheric Circulation in the Tropics." *J. Climate*, **12**, 2956-64.
- 1999 Bitz, C.M. and D. S. Battisti: "Interannual to Decadal Variability in Climate and the Glacier Mass Balance in Washington, Western Canada, and Alaska". *J. Climate.*, **12**, 3181-3196.
- 1998 Barsugli, J.J. and D. S. Battisti: "The Basic Effects of Atmosphere-Ocean Thermal Coupling on Midlatitude Variability". *J. Atmos. Sci.*, **55**, 477-93.
- 1998 Randall, D., J. Curry, D. S. Battisti, G. Flato, R. Grumbine, S. Hakkinen, D. Martinson, M. Miller, R. Preller, J. Walsh and J. Weatherly: "Status of and Outlook for large-scale modeling of atmosphere-ice-ocean interactions in the Arctic." *Bull. Amer. Met. Soc.*, **79**, 197-219.
- 1998 Neelin, J. D., D. S. Battisti, A. C. Hirst, F. F. Jin, Y. Wakata, T. Yamagata and S. Zebiak: "ENSO Theory". *J. Geophys. Res.*, **103**, 14,261-290
- 1998 Bhatt, U.S., M.A. Alexander, D.S. Battisti, D.D. Houghton and L.M. Keller: Atmosphere-ocean interaction in the North Atlantic Ocean: near-surface climate variability. *J. Climate*, **11**, 1615-32.
- 1998 National Research Council, "Climate and Climate Change Research Entering the Twenty-First Century." Author of chapter five of "The Atmospheric Sciences: Entering the Twenty-First Century", Washington DC, pp. 364.
- 1998 Chang, P. and D.S. Battisti: "The Physics of El Nino." *Physics World*, **8**, 41-47.

- 1998 National Research Council: "Decade-to-Century-Scale Climate Variability and Climate Change: A Science Strategy." Authors D.G. Martinson, D.S. Battisti, R. Bradley, J. Cole, R. Fine, M. Ghil, Y. Kushnir, S. Manabe, M. McCartney, P. McCormick, M. Prather, E. Sarachik, P. Tans, L. Thompson, and M. Winton. Washington, D.C., pp. 142.
- 1997 Chen, Ying-Quei, D.S. Battisti, T.N. Palmer, Joseph Barsugli and E.S. Sarachik: "A study of the predictability of Tropical Pacific SST in a coupled atmosphere/ocean model using singular vector analysis: the role of the annual cycle and the ENSO cycle." *Mon. Wea. Rev.*, **125**, 831-45.
- 1997 Ronca, R. and D.S. Battisti: "Anomalous sea surface temperatures and local air-sea energy exchange on intra-annual timescales in the northeastern subtropical Pacific". *J. Climate*, **10**, 102-117.
- 1997 Zhang, Y., J.M. Wallace and D.S. Battisti: "ENSO-like Interdecadal Variability: 1900-93". *J. Climate*, **10**, 1004-20.
- 1997 Battisti, D.S., C.M. Bitz, and R.E. Moritz: "Do General Circulations Models Underestimate the Natural Variability in the Arctic Climate?" *J. Climate*, **10**, 1909-1920.
- 1996 Bitz, C.M., D.S. Battisti, R.E. Moritz and J.A. Beesley: "Low-frequency variability in the arctic atmosphere, sea ice, and upper-ocean climate system." *J. Climate*, **9**, 394-408.
- 1995 Battisti, D.S.: "Decadal to Century Time-Scale Variability in the Coupled Atmosphere-Ocean System: Modeling Issues." In "Natural Climate Variability on Decade-to-Century Time Scales." Eds. D.G. Martinson, K. Bryan, M. Ghil, M.M. Hall, T.R. Karl, E.S. Sarachik, S. Sorooshian, and L.D. Talley. National Research Council, pg. 419-429.
- 1995 Battisti, D.S. and D. Ovens: "The Dependence of the Low-Level Equatorial Easterly Jet on Hadley and Walker Circulations." *J. Atmos. Sci.*, **52**, 3911-32.
- 1995 Chen, Y.-Q., D.S. Battisti and E. Sarachik: "A New Ocean Model for Studying the Tropical Ocean Aspects of ENSO." *J. Phys. Oceanog*, **25**, 2065-87.
- 1995 Mantua, N.J. and D.S. Battisti: "Aperiodic variability in the Zebiak-Cane coupled ocean-atmosphere model: ocean-atmosphere interactions in the western equatorial Pacific." *J. Climate*, **8**, 2897-2927.
- 1995 Battisti, D.S. and E. Sarachik. "Understanding and Predicting ENSO". *Rev. Geophys.*, **33**, 1367-76.
- 1995 Battisti, D.S., U. Bhatt and M.A. Alexander: "A Modeling Study of the Interannual Variability in the Wintertime North Atlantic Ocean." *J. Climate*, **8**, 3067-83.
- 1995 Levy, G. and D.S. Battisti: "On the symmetric stability of low-level equatorial flow." *The Global Ocean and Atmosphere System*, **3/4**, 341-354.

- 1994 Mantua, N.J. and D.S. Battisti: "Evidence for the Delayed-Oscillator Mechanism for ENSO: the "Observed" Oceanic Kelvin mode in the Far Western Pacific." *J. Phys. Oceanogr.*, **24**, 691-699.
- 1994 Molinari, R., D.S. Battisti, K. Bryan and J. Walsh: "The Atlantic Climate Change Program." *Bull. Amer. Met. Soc.*, **75**, 1191-1199.
- 1993 Hess, P.G., D.S. Battisti and P. Rasch: "Maintenance of the Intertropical Convergence Zones and the Large-Scale Tropical Large-Scale Circulation on a Water Covered Earth." *J. Atmos. Sci.*, **50**, 691-713.
- 1993 Hess, P.G., H.H. Hendon and D.S. Battisti: "The Relationship between Mixed Rossby Gravity Waves and Convection in a General Circulation Model." *J. Met. Soc. Japan*, **71**, 321-338.
- 1991 Battisti, D.S.: Reply to comments to "On the Role of Subtropical Oceanic Rossby Waves during ENSO." *J. Phys. Oceanogr.*, **21**, 461-465.
- 1991 Battisti, D.S. and P.G. Hess: "The Effect of Parameterizing Convection on the Steady Tropical Large-Scale Circulation of an Aqua-Planet." *Modelus Numericos de la Atmosfera y el Oceano. Fisica de la Tierra*, 3, pp 11-42. Ed. M. Castro, Universidad Complutense de Madrid.
- 1990 Battisti, D.S.: "Interannual Variability in Coupled Tropical Atmosphere-Ocean Models." In *Climate-Ocean Dynamics*, M.E. Schlesinger, Ed. Kluwer Academic Publishers, 127-160.
- 1989 Battisti, D.S. and A.C. Hirst: "Interannual Variability in the Tropical Atmosphere-Ocean System: Influences of the Basic State, Ocean Geometry and Nonlinearity." *J. Atmos. Sci.*, **46**, 1687-1712.
- 1989 Battisti, D.S.: "On the Role of Subtropical Oceanic Rossby Waves during ENSO." *J. Phys. Oceanogr.*, **19**, 551-559.
- 1989 Battisti, D.S., A.C. Hirst and E.S. Sarachik: "Instability and Predictability in Coupled Atmosphere-Ocean Models." *Phil. Trans. R. Soc. London, A*, **329**, 237-247.
- 1988 Battisti, D.S.: "The Dynamics of Tropical Interannual Variability in the Coupled Ocean-Atmosphere System." Ph.D. Thesis, University of Washington, 153 pp.
- 1988 Battisti, D.S.: "The Dynamics and Thermodynamics of a Warming Event in a Coupled Tropical Atmosphere/Ocean Model." *J. Atmos. Sci.*, **45**, 2889-2919.
- 1984 Battisti, D.S. and B. Hickey: "Application of Remote Wind-Forced Coastal Trapped Wave Theory to the Oregon and Washington Coasts." *J. Phys. Oceanogr.*, **14**, 887-903.

1983 Clarke, A.J. and D.S. Battisti: "Identification of the Fortnightly Signal in the Gulf of Guinea." *J. Phys. Oceanogr.*, **13**, 2192-2200.

1982 Battisti, D.S. and A.J. Clarke: "A Simple Method for Estimating Barotropic Tidal Currents on Continental Margins with Specific Application to the M_2 Tide off the Atlantic and Pacific Coasts of the United States." *J. Phys. Oceanogr.*, **12**, 8-16.

1982 Battisti, D.S. and A.J. Clarke: "Estimation of Near Shore Tidal Currents on Non-Smooth Shelves." *J. Geophys. Res.*, **87**, 7873-7878.

1981 Clarke, A.J. and D.S. Battisti: "The Effect of the Continental Shelves on Tides". *Deep-Sea Research*, **28**, 665-682.

NON REFEREED PAPERS AND ABSTRACTS: not reported here

SEMINARS AND CONFERENCES

Invited Seminars: NATO ARW on Climate, Oxford, England (1988); AGU Spring Meeting, Baltimore (1988); Meeting of the Royal Phil. Soc. of London (1988); EPOCS 10th Annual Meeting, Miami (1989); University of Washington (1990); US-Japan Conference on Atmosphere-Ocean interaction (1990); ARCSS Modeling Workshop, Monterey CA (1992); National Academy of Sciences Workshop on 10-100 year climate variability (1992); NASA Workshop on Polar Data Sets; GFDL Princeton University (1990, 1991, 1992, 1993); University of Chicago (1994); Congress of the Canadian Meteorological and Oceanographic Society (1995); TOGA International Scientific Conference, Melbourne AU (1995); AMS Meeting (1995); NOAA Postdoctoral Program Summer Institute (1996); International Center for Theoretical Physics, Trieste Italy (1996; 1997; 2002); ARTS Workshop, Hawaii (1996); NSF's Arctic and Climate Symposium, Cancun (1996); COLA (1997); McGill University (1997); American Meteorological Society Annual Meeting (1997); University of Victoria (1997); Scripps (1997); NCAR (1997); Padilla Bay (1997); International ACSYS meeting (1997); US/Japan IARC Workshop (1998), PEP1 Workshop, Venezuela (1998), Goddard Institute for Space Studies (1998), Harvard (1998); COLA (1998); AMS Annual Meeting (1999), Univ. of Alaska (1999, 2000), Univ. of Maryland (1999), Equatorial Theoretical Panel (1999), Pep Interhemispheric Workshop Bern, Switzerland (1999), US-China Symposium on Climate (1999), MIT (1999), NRC Climate Research Committee (1999,2000), Cal Tech (2000), Stanford (2000), NCAR (2000), QRC UW (2001), Forestry UW(2001), NSF (2001), Workshop on Stochastic Models of Climate, Berlin (2001), WHOI (2001), PAGES PEPIII Conference Aix-en-Provence, France (2001); AGU (2001); ARCHES Meeting, Lamont (2001); Stanford (2002); AMQUA Meeting (2002), Anchorage AK; Swiss Summer Course on Climate, Grindelwald (2002, 2003); University of Madrid (2002); Stanford (2002); Oregon State University (2002), Goldshmidt Conference, Davos (2002), Woods Hole Oceanographic (2002); AGU(2002); ARCHES Lamont (2002); Harvard (2002); Woods Hole Forum (2002); Univ. Alaska at Fairbanks (2003); Paleoclimate observations and dynamics: a short course, Italy (2003); AGU (2003); Geological Society of America Annual Meeting (2003); Berkeley (2003); CLIVAR-PAGES Workshop on

Drought in Americas (2003); NCAR (2004); Univ. Alaska (2004), Univ. of Minnesota (2004), Univ. Wisconsin (2004); AAAS Climate Briefing (2004), Stanford (2004), Univ. of Bergen Norway (2005), Stanford (2005), Lamont (2005), International Research Institute (2005), Carnegie Institution (2005), University of British Columbia (2006), Stanford (2006), Quaternary Research Center UW (2006), University of Bergen (2007), STUPOR 2007, Bjerknes Center (2007), Stanford University (2007), Chinese Center for Agricultural Policy Beijing (2007), Lamont (2007), University of Bergen (2007), NSF Workshop on Interactions between Climate and Landscapes (2007), International Conference on Polar Processes (2007); McKnight Foundation (2007), Gilbert Club (2007), Univ of Colorado (2008), Brigham Young University (2008), Yale University (2008), Univ. of Edinburgh (2008), Univ. of Bergen (2008), Univ. of Massachusetts (2008), AGU (2008), Norwegian Embassy Science Week (2008), Univ. of British Columbia (2009), University of Oregon (2009), EGU (2009), Conference on the Law of Climate Change (UW) (2009), World Science Festival (NY City, 2009), MIT (2009), CIMMYT (2009), University of Bergen (2009), Bergen Research School (2009), Stanford (2009), University of Santiago (2009), RIMES Santiago (2009), Duke (2009), AGU (2009, Caltech (2010), National Center for Atmospheric Sciences (United Kingdom, 2010), University of Bergen (2010), University of Wisconsin (2010), Stockholm University (2010), NRC (2011), University of Bergen (2011), Columbia (2011), NASA GIS (2011), Harvard (2011), Gordon Conference on Climate Landscape Interaction (2011), Canadian Meteorological and Oceanographic Society Annual Meeting (2011), Presidential Council of Advisors on Science and Technology (2011), American Geophysical Union Annual Meeting San Francisco (2011), Lamont Columbia University (2011), National Council for Science and the Environment (NCSE) Conference on Security and Environment (2012), Stanford (twice, 2012), Earth Observatory of Singapore (2012), Max Plank Institute, Hamburg (2012), University of Bergen (2012), Annual AAAS Meeting Vancouver CA (2012), Annual Meeting of the American Quaternary Association (2012), Cornell University (2012), University of Wisconsin Madison (2012), Invited Speaker AGU Fall meeting (2012), University of California Berkeley (2013), Geophysical Fluid Dynamics Laboratory Princeton (2013), Lamont (2013), University of Toronto (2013), Princeton University (2013), University of Stockholm (2103), University of Concepcion, Chile (2014), Western Washington University (2014), Cargill (2 in 2014), MIT (2 in 2014), WHOI (2 in 2014), University of Stockholm (2104), Harvard University (2014), Lamont Doherty Earth Observatory Columbia University (three visits and seminars, 2014), University of Edinburgh (3 in 2014), St. Andrews University (2014), Woods Hole Oceanographic Institution (2014), MIT (2014), Oxford University (2014), Harvard University (2014), University of Edinburgh (2015), St. Andrews University (2015), Reading University (2015), Glasgow University (2015), Brigham Young University (two in 2015), University of Utah (two in 2015), Utah State University (2015), Massachusetts Institute of Technology (four seminars in 2015), Stockholm University (2015), Scottish Association for Marine Sciences (2015), Canadian Meteorological and Oceanographic Annual Meeting (2015), Montana State University (2015), Jussieu Paris (2015). University of Arizona (2016), Niels Bohr Institute Copenhagen (2016), Caltech (2016), European Geophysical Union (2016), University of Edinburgh (2016), Stockholm University (2016; two seminars), Oxford University (2016; four seminars), University of Albany (2016; two seminars), University of Bergen (2016; two seminars), American Geophysical Union (2016; three lectures), Caltech (2017; two seminars), University of Bergen (twice in 2017), Scripps (2017), Columbia University (2017), Chinese Academy of Sciences Xian (2017), University of Reading (2017),

Oxford University (2017), University of Stockholm (2017), Universidad de Chile (2017), Brown University (2017), Stanford University (2017), Institute of Pierre Simon Laplace, Paris (2017)

Invited Participant, JIO Arctic System Science Panel, Lake Arrowhead CA (1990); EPOCS 14th Annual Meeting, Miami (1993); PALE Workshop (1995); PACS Implementation Meeting, Miami (1995); NSF ARCSS All Hands Workshop (1996); NCAR Climate Systems Modeling Workshop, Breckenridge (1996); CLIVAR Atmosphere-Ocean Workshop, Vancouver (1996); Ocean CLIVAR Workshop, France (1996), Arctic and Global Climate Workshop, Cancun (1996); OSTP/USGCRP Workshop on Impacts of Global Climate Change, Seattle (1997); Atlantic Variability Experiment NEG (1998); EuroClivar Science Meeting (1998); US/Japan Workshop on Climate (1998); US/Japan Arctic Workshop (1998), NOAA OGP PostDoc Summer Institute (1998), CLIVAR Commitments Meeting (1998), COLA ENSO Workshop (1998), International PAGES-CLIVAR Meeting, Venice (1999); Decadal Climate Variability Workshop, Honolulu (2001); ARCHES Lamont (2001, 2002); UCAR Postdoctoral Summer Institute (1998-2010, biannual), US-China Workshop on the Asian Monsoon and the Evolution and Growth of the Tibetan Plateau, Sanya (2007), ARCHES Lamont (2007), Thematic Working Group on Glacial Cycles (NSF, University of Colorado 2006, 2007), Global Hydrology Workshop (Columbia University, 2007), African Climate Workshop (Columbia University, 2007), Workshop on conservation of genetic resources and climate change (Bellagio Italy, 2007), the Novim Group (2008), Workshop on the Role of the Cryosphere in Climate (Harvard 2009), Changling Symposium (2009), Workshop on Climate Change Food Security (Bellagio Italy 2010); CLIVAR Workshop on Climate Change and ENSO (2010); Changling Symposium (2010), Workshop on Climate in and around Lake Issyk Kul, Kyrgyzstan (2011), Presidential Council of Advisors on Science and Technology meeting on re-inventing US Agriculture R&D (2011), Rockefeller's Uncommon Dialogs (Stanford 2012), National Council on Sustainability and Environment's Symposium on Security and the Environment (Washington DC 2012), NESCENT workshop on The Role of Mountains, Landscape, and Climate in Generating Amazon/Andean Biodiversity (2012), ASU Origins Project on Global Warming (2013), International Workshop on "Volcanoes and Climate", Stockholm University (2014), International Workshop on "Thermohaline Circulation", Stockholm University (2015), International Workshop on "Unsolved Puzzles for Glacial Cycles", Stockholm University (2016), Weather Extremes Workshop, Stockholm University (2017), Climate and Migration Conference (Busan Korea, 2017)

Seminars and Conferences Attended (not already listed under "Invited"): NCAR Summer Colloquium (1987); NATO Advanced Study Conference, Erice, Sicily (1986); IUGG (1987); International TOGA Scientific Conference (1990); AMS Conference on Climate (1991); Second Equatorial Theoretical Panel, URI (1991); AMS Fifth Waves and Stability Meeting (1991); ACCP PI Meeting (1993, 1994); AGU meetings, San Francisco (1980-83, 1985, 1991, 1993, 2014); Hayes Symposium, Seattle (1994); Workshop on the impact of Extratropical SST on the Atmosphere, Boulder (1999), AGU (2006, 2007), Conference on "Food Security" Engelberg Switzerland (2014)

Seminars (not already listed under "Invited") presented in various places including: AGU and IUGG conferences, National Center for Atmospheric Research (1987, 1990), Woods Hole Oceanographic Institution, Oregon State University (1982, 1988, 1990), University of

Washington (regularly), GFDL Princeton (1988, 1993), IOS, University of Wisconsin (1988-90), Penn State University (1988), Florida State University (1983), Lamont Doherty Geological Observatory (1988), University of Madrid (1988), and Palma de Mallorca (1988).

REFEREED PAPERS/PROPOSALS FOR THE FOLLOWING PROFESSIONAL ORGANIZATIONS

National Academy of Sciences, Journal of Atmospheric Sciences, Journal of Climate, J. Meteor. Soc. Japan, Geophysical Research Letters, Journal of Physical Oceanography, Continental Shelf Research, National Science Foundation, Deep-Sea Research, U.S. Department of State, Nature, National Oceanic and Atmospheric Administration, Global and Planetary Science, The Atmosphere-Ocean System, Cambridge University Press, Oxford Press, Bulletin American Met. Society, West Publishing, New Zealand Foundation for Research, Science and Technology, Tellus, J. of Geophysical Research (Atmospheres), J. of Geophysical Research (Oceans), NERC (UK), MacArthur Foundation; Climatic Change, Climate Dynamics.

MEMBERSHIP IN NATIONAL COMMITTEES AND ORGANIZATIONS

1990 - 1993 AMS Committee on Interaction of the Sea and Atmosphere.
1992 - 1995, 1997-1998 NOAA Atlantic Climate Change Program Scientific Working Group. Membership; cochair, 1992-1994.
1993 – 1996 Science Working Group, Surface Heat and Energy Balance of the Arctic (SHEBA).
1994 - 1996 National Academy of Science/National Research Council Climate Research Committee (CRC).
1994 – 1998 National Academy of Science/National Research Council Panel on Decadal to Century Climate Variability (DECCEN).
1996-1997 Member, Science Steering Committee (SSC) for NSF Arctic System Science (OAI)
1996-1997 Cochair, CSM Decadal Variability Working Group
1996-1999 Member, Steering Committee for NOAA Postdoctoral Program; Chair 1999
1998 Cochair, CSM Natural Variability Working Group
1998-2000 Member, NSF’s SEARCH Science Steering Group
1998-2000, 2002 Cochair, U.S. Science Steering Committee for Climate (US CLIVAR)
2001 Member, U.S. Science Steering Committee for CLIVAR
1998-2005 Member, NOAA’s Abrupt Climate Change Panel
1998-present Member, NSF’s Climate Systems Laboratory Review Panel
2000-2007 Member, U.S. CLIVAR-PAGES Science Steering Committee
2001-2007 Member, Advisory Committee for Canadian Climate Program (CLIVAR)
2002-2003 Chair, NOAA Joint Institutes
2002-2003 Member, Senior Research Council, NOAA
2003-2006 Director, Earth Initiative, University of Washington
2009-2010 Member, Committee on Stabilization Targets for Atmospheric Greenhouse Gas Concentrations. National Research Council, National Academy of Sciences
2010-present Member, External Advisory Board, The Washington Journal of Environmental Law & Policy

- 2012 Convener, The NOAA Climate and Global Change Postdoctoral Summer Symposium, Steamboat CO
- 2012 – present Member, the NCAR Community Earth System Model Advisory Board (CAB)
- 2013 Visiting Committee, Department of Earth and Planetary Science, Harvard University
- 2013- 2017 Member, Advisory Board for the Center for Climate and Resilience Research in Chile
- 2013 – present Editorial Board, *The Sea*
- 2015-2017 NOAA/UCAR Postdoctoral Fellowship Selection Committee
- 2016 Member, International Review Panel, Earth Observatory of Singapore (EOS)

GRANTS

- 1989-1991 Dynamics and Maintenance of the Intertropical Convergence Zones. National Science Foundation. \$164,416
- 1990-1992 Inter and Intra Annual Variability in an Interactive Ocean Atmosphere Climate System (with D. Houghton). National Science Foundation. Approx. \$48,000
- 1990 Inter and Intra Annual Variability in an Interactive Ocean Atmosphere Climate System. Wisconsin Alumni Research Foundation (WARF). \$7,920
- 1991-1994 Coupled Modeling of the Arctic Ocean-Atmosphere-Ice System. NSF (with R. Moritz). Approx. \$325,000
- 1992-1995 ENSO modeling with Coupled Atmosphere-Ocean Models. NOAA (with E. Sarachik). Approx. \$900,000
- 1992-1994 The Effects of Tropical Boundary Layer Processes on the Large-Scale Circulation. NOAA. \$170,000
- 1994-1996 Atmosphere-Ocean Interaction in the North Atlantic and Connections with the Ocean Basins. NOAA. \$141,631
- 1993-1994 Study of the Dynamics and Maintenance of the Intertropical Convergence Zones. National Science Foundation. \$41,094
- 1995-1996 Coupled Modeling of the Arctic Ocean-Atmosphere-Ice System. National Science Foundation (with R. Moritz). (\$73,000)
- 1996-1999 Decadal Natural Variability in the Tropical Atmosphere/Ocean Climate System. NOAA. (approx. \$320,000)

- 1996-1999 The Relationship Between Climate and the Glaciers in Western North America. National Science Foundation. (with C. Raymond and H. Conway, approx. \$230,000 + supplement).
- 1995-2005 The Center for Science, the Environment and Society. NOAA. (approx. \$650,000 per year for Battisti and Sarachik)
- 2000 Workshop on ENSO: Past, present and future (with D. Schrag, Harvard). NOAA (\$80,000)
- 1999-2002 Decadal Variability Around the Atlantic Basin: the Role of Land/Atmosphere/Ocean Interactions in the Atlantic" NOAA. (\$383,151)
- 2001-2005 Program on Climate and Climate Variability. University Initiatives Fund, University of Washington (co PI with Jim Murray and company, \$2,000,000). Starting in 2006 this is a UW program with permanent funding.
- 2003-2005 Observations for reducing uncertainty in short term climate forecasts. NOAA (\$120,000)
- 2003-2005 Comer Fellowships, Comer Foundation (\$330,000)
- 2004-2005 Climate affecting sustainability in the Yaqui Valley, Mexico (Packard Foundation \$55,000 subcontract from Stanford)
- 2004-2007 ENSO Impacts on Indonesian Agriculture in a Warmer World: Integrating Climate Science, Risk Assessment, and Policy Analysis (with Naylor, Falcon and Vimont, NSF, \$702,366)
- 2005-2008 Rapid Climate Change due to Sea Ice Dynamics in the North Atlantic and Arctic Oceans (with Cecilia Bitz, NSF, \$352,343)
- 2005-2007 Climate and Food Security in Indonesia (Tamaki Foundation, \$75,000)
- 2006-2008 Comer Fellowships, Comer Foundation (\$220,000)
- 2006-2009 Impacts of El Nino-Southern Oscillation (ENSO) Events on Chinese Rice Production and the World Rice Market (with Naylor, Falcon and Roselle, NSF, \$650,000)
- 2006-2008 Climate and Food Security in China (Tamaki Foundation, \$75,000)
- 2008-2009 Understanding ENSO Biases in GCMs and Their Relation to Mean State Biases (with Dan Vimont; NOAA \$303,000)
- 2008-2010 Geo-engineering climate change (Tamaki Foundation, \$400,000)

- 2008-2012 UW-U Bergen International Partnership Program (SIU, \$300,000)
- 2009-2012 Dynamical Climate Reconstruction Using Paleoclimate Data and Ensemble State Estimation (with Greg Hakim and Gerard Roe; NSF \$370,030)
- 2009-2013 Collaborative Research: Collaborative Research: Growth of the Tibetan Plateau and Eastern Asia Climate: Clues to Understanding the Hydrological Cycle (w/ Gerard Roe UW and Peter Molnar CU; NSF \$771,780)
- 2010 Constructing a Zero-Energy Rice Seed Bank in Jharkhand, India. (w/ Suman Suhai; Seattle Rotary Club and the Goldman Foundation. \$10,300)
- 2011 Imagining a warmer world: using scenario planning to create fair and equitable adaption law and policy (World University Network, \$25,500)
- 2012-2013 A Path for Youth: A Partnership for Climate Change Education in the Pacific Northwest; NSF \$164,522
- 2012 Climate Variability, crop price volatility and Food Security (Tamaki Foundation, 75,000\$)
- 2012-2013 Pest Pressures and Climate Change (Tamaki Foundation, 150,000\$)
- 2013-2015 Collaborative Research: Growth of the Tibetan Plateau and Eastern Asia Climate: Clues to Understanding the Hydrological Cycle (w/ co-PIs Gerard Roe UW and Peter Molnar CU; NSF \$326,234.)
- 2013-2016 Climate Variability and Food Insecurity (Tamaki Foundation, 300,000\$)
- 2013-2018 UW-U Bergen International Partnership Program (SIU, \$330,000)
- 2013-2016 Dynamical Climate Reconstruction Using Paleoclimate Data and Ensemble State Estimation (w/ co-PIs Greg Hakim and Gerard Roe; NSF \$422,635)
- 2014-2017 Dynamics of Mountains, Landscapes and Climate in the distribution and generation of biodiversity of the Amazon/Andean Forest (NSF \$380,000)
- 2015-2019 Climate Variability and Food Insecurity (Tamaki Foundation, 900,000\$)

TEACHING EXPERIENCE

Notes: Most of the courses below meet four hours per week. Readings Courses are not listed.

University of Washington, Seattle, WA

1993, 1995, 1997, 1999, 2001, 2011 Atmosphere/Ocean Interaction (ATMS 591, ATMS 560)
1993 Equatorial Physical Oceanography (OCN 548a)
1990-1993, 1998, 1999, 2002, 2004, 2006, 2011 Weather (ATMS 101)
1994, 1995, 1997, 1999-2002, Honors Arts and Science (HA&S 220A) Maintenance of the
Climate System
2003 Honors Arts and Science (HA&S 220A) Climate of the Pacific Northwest
2004 Honors and Science (HA&S 221A) The Physical Earth
2005 Honors (HA&S 221A) The Biological Earth
2005 Honors (HA&S 222A) The Human Earth
2006, 2007, 2010 Honors (HA&S 222A) Food and the Environment
2007, 2010 ESS 590/ATMS 588 Knowability and No Ability
2009, 2010 (HA&S 222D) Global Warming
2006 The Holocene Express (with G. Roe and J. Sachs; ATMS 590)
1991-1998, 2005 Atmospheric Dynamics II (ATMS 442)
1991, 1994, 2012, 2013, 2013 Atmospheric Dynamics II (ATMS 542)
1996 Planetary Atmospheric Dynamics (ATMS 556)
2000, 2010 Geophysical Fluid Dynamics II (ATMS 509/OCN 509)
2003, 2004, 2005, 2007, 2009 Paleoclimate (ATMS 589/ESS 589)
2008, 2009, 2014, 2017 Global Warming (ATMS 111)
2010, 2011 Climate and Justice (LAW 576A)
2010 Climate Dynamics, Short Course, University of Bergen
2010 Atmosphere-Ocean Dynamics (ATM560/OCN560)
2011 Climate Dynamics (ATMS587/OCN587)
2012 (twice), 2016 Climate and Climate Change (ATMS 211)
2012 Climate Justice (LAW B576ab)
2012 Atmospheric Dynamics II (ATMS 542)
2012 Everything you Wanted to Know about Climate (ATMS/ESS/POE/OCN 586)
2013 Atmospheric Dynamics (ATM442)
2013 Climate and Society (Honors 220b/IntSci 402)
2015 Introduction to Atmospheric Sciences (ATMS 220)
2016 General Circulation (ATMS 545)
2016 Atmosphere-Ocean Dynamics (ATMS 560/OCEAN 560)
2017 Science and Society (Honors 222b)

University of Wisconsin, Madison, WI

1989 Atmosphere-Ocean System (grad.)
1989 Physical Oceanography II (grad.)
1990 Introduction to Meteorology, (undergrad.)
1990 Tropical Oceanography Seminar (grad.)

Other

1997 Short Course in ENSO, International Centre for Theoretical Physics (ITCP), Trieste Italy
(Principal Lecturer)
1999 Short Course on Atmosphere/Ocean Interaction, Borno Sweden (Principal Lecturer)
1999 Houghton Lecturer, MIT

2000 NCAR Colloquium on Dynamics of Decadal to Centennial Climate Variability (Principal Lecturer)

2000 First Latin American School in Ocean and Climate Modelling, University of Concepcion (Principal Lecturer)

2002 Short Course on ENSO and Future Climate, ITCP, Trieste Italy

2002 Swiss Climate School, Grendelwald

Lecturer in the course 'Global Biogeochemical Cycles', ATMS 508 (annually)

2002 UW Research Forum

2003 Swiss Climate School, Grendelwald

2003 Paleoclimate observations and dynamics: a short course.

2003 UW Science Forum

2003 Summer course in Arctic Climate (Fairbanks)

2004 Thompson Lecturer, NCAR

2006 Summer School on "Multidecadal climate variability and teleconnections", Finse Norway

2007 Amicus Brief to the US Supreme Court on Massachusetts v. EPA (one of three principal authors)

2009 Lecturer and co-organizer, ACDC Summer School on the Climate Dynamics (Norway)

2009 Bergen Research Summer School (Norway)

2010 Lecturer and co-organizer, UW-UBergen-MIT ACDC Summer School in Ice Sheet- Ocean Dynamics, Lyngen Norway

2011 Amicus Brief to the US Supreme Court on American Electric Power Company, Inc., et al. v. State of Connecticut, et al. (co-author)

2011 Main Lecturer, Summer School on Climate Landscape Interaction, Camp Davis, WY

2011 Main Lecturer and Organizer, ACDC Summer School on Warm Climates, Friday Harbor WA

2012 Main Lecturer and co-organizer, ACDC Summer School on Climate and Landscapes, Dovre Norway

2013 Main Lecturer and co-organizer, ACDC Summer School on Deglaciation, Nyksund Norway

2014 Main Lecturer and co-organizer, ACDC Summer School on Fate of the Greenland Ice Sheet, Disco Island, Greenland

2015 Lecturer and co-organizer, ACDC Summer School on Volcanism and Climate, Iceland

2015 Organizer and Main Lecturer, Summer School on the Mount Ranges and High Plateaus, Tetons, Wyoming Aug 16-29, 2015

2015 Co-Organizer, Workshop on the Atlantic Meridional Overturning Circulation in a Global Perspective, Stockholm Sept 8-10

2015 Houghton Lecturer, MIT

2016 Schneider Lecturer, AGU Fall Meeting

2017 100th Anniversary of the Geophysical Fluids Institute, University of Bergen; keynote lecture

2017 Main Lecturer and co-organizer, ACDC Summer School on Dynamics of the Seasonal Cycle, Rondane Norway

UNIVERSITY, DEPARTMENTAL AND COMMUNITY SERVICE

Editor for, and contributor to, various documents for the National Academy of Sciences.

- 1991-1993, 2000 (Chair) Qualifying Exam Committee, Atmospheric Sciences
- 1991, 1993, 1994, 1997 Member, Selection Panel for The NOAA Climate & Global Change Postdoctoral Program
- 1993 Lecture to Third Graders from Steven's Elementary School, Seattle, WA.
- 1993 Organized a National Meeting on "Decadal-to-Century Variability in the Atlantic Climate Systems". The meeting was held at GFDL/Princeton University; 80 scientists attended from four countries. The proceedings of the meeting are summarized in a NOAA publication.
- 1993 Co-author of the "Update of the ACCP Science Plan"
- 1993 Department Committees to review the Qualifying Exam and to institute an undergraduate minor in Atmospheric Sciences
- 1993-1996 Member, Research Council for the Physics Department, Gonzaga University
- 1994 Univ. of Washington representative at the UCAR meeting, Boulder CO.
- 1994 Participant and Speaker, Global Environmental Change Videoconference
- 1994-2003 Organizer, Undergraduate Climate Symposium, Univ. of Washington
- 1995 Consultant (non-profit) for PBS' "Bill Nye Science Show"
- 1995 Prepared an educational segment on ENSO for SeaWorld (CA) Television
- 1995 Proposal Review Panel Member, NOAA/NSF
- 1995 Speaker, UW Orientation Program for Transfer Students
- 1995 Speaker, UW Orientation Program for New Students
- 1995 Speaker, UW Orientation Program for Parents of New Students
- 1995 Member, NSF Review Panels for the planning and implementation documents of the ACCE field experiment
- 1996-present Associate Editor, Journal of Climate
- 1997 Co-Organizer, JISAO Paleoclimate Workshop(70 participants)
- 1997 Public Lecture, Padila Bay Natural Estuarine Reserve
- 1997 Co-Convener, JISAO International workshop on evaluation of paleo data
- 1997 Speaker and Participant, Education of Media on ENSO and its impacts, UW
- 1998 Presentation to Regents: Research and Outreach
- 1998 Co-chair, EuroClivar Science Meeting, Firenze
- 1998 Speaker, UW Program for High School Honor Students
- 1998 Speaker, Department of Atmospheric Science Freshman Interest Seminar
- 1999 Search Committee, Director of Oceanography
- 2000 Participant, NOAA Office of Global Programs Advisory Panel Meeting
- 2000 Co-organizer, National workshop on "ENSO: Past, present and future"
- 2000-present Member, NSF's Climate Systems Laboratory Computer Allocation Panel
- 2000 Co-organizer, Joint JISAO/QRC Workshop on Paleoclimate of the Pacific Northwest
- 2000 Organizer, NOAA Postdoctoral Research Summer Institute
- 2000 Principal Lecturer, NCAR/ASP Summer Colloquium on Decadal Climate Variability
- 2000 Principal Lecturer, First Latin American School in Ocean and Climate Modelling, University of Concepcion

2000 Co-Chair, Symposium for the UCAR Postdoctoral Program, AGU
2002-2004 Board Member, Program on Climate and Climate Change (PCC)
2002 Chair, Review Committee of the UW Program on the Environment (PoE)
2002-2010 Member, UW Dept. of Atmospheric Sciences Committee on Graduate Studies (COGS)
2003 Minnesota Public Radio: “Climate Change: Science, Impacts and Policy”
2002-present UW Members Representative to the University Center for Atmospheric Research (UCAR)
2006 Panelist, Earth Day Network global broadcast on Climate Change.
2008 Panelist, Focus the Nation (UW)
2009 Interviews with NPR, BBC, CBS, ABC, NY Times, The Guardian, and over 20 other media outlets
2009-present Fleagle Lecture Committee
2010 Search Committee for the Faculty position in climate and policy at UW Bothell
2010-2013 Board Member, Three Degrees Institute for Climate Justice
2010-2013 Board Member, The Washington Journal of Environmental Law and Policy
2010 Co-organizer and host of the UW Public Lecture Series and course, “Eating your Environment”
2011 Chair, Search Committee for the Atmosphere-Biosphere Faculty Position
2012 Member, Search Committee for the Human Dimensions Faculty Position (SMA)
2012 Member, Awards Committee Scandinavian Studies Program
2012 Chair, Promotion Committee for Prof. Alexander
2012 Chair, Promotion Committee for Prof. Bitz
2012-2013 Chair, Search Committee for the Climate Dynamics Faculty Position
Annually Guest speaker in various classes at UW (approximately 10 lectures per year)
Annually Seminar speaker in various departments at UW (approximately four per year)
2012 Panelist, Meet Greet Teach
2016 University Unitarian Church Seattle (seminar on Climate Change and Global Food production)
2016 Chair, Search Committee for Faculty position in Regional Climate Modelling
2016 Chair, Search Committee for Faculty position in Climate Dynamics
2016-2018 Member, EarthLab Science Steering Committee
2017-present Member, International Advisory Board, Research School on Changing Climates in the Coupled Earth System (CHESS), University of Bergen

GRADUATE STUDENT COMMITTEES, CHAIR OR CO-CHAIR

Chair of current degree students (all students at UW, unless noted):

Ph. D.: Joshua Griffin (Anthropology), Jill Johannessen (U. Bergen), Xiaojuan Liu, Fiona Lo, Judy Twedt

M.S.: Yue Dong, Lucas Zeppetello

Chair or Co-Chair of Completed Degrees by:

Ph. D.: Nate Mantua (received 1994), Uma Bhatt (1995, U. Wisconsin), Joe Barsugli (1995), Ying-Quei Chen (1996), Cecilia Bitz (1997), Anthony Beesley (1997), Chris Thompson (1998), Xhouhua Wu (1998), Scot

Johnson (1999), Daniel Vimont (2002); Jeff Yin (2002); Michaela Biasutti (2003), Ken Takahashi (2006), Camille Li (2007), Will Roberts (2007), Francesco Pausata (U. Bergen, 2010), Aaron Donohoe (2011), Robert Nicholas (2011), Sandra Penny (2103), Kelly McCusker (2013), Alyssa Atwood (Oceanography 2015), Nathan Steiger (2015), Elizabeth Maroon (2016).

M.S.: David Ovens (1993), Ying-Quei Chen (1993), Denise Worthen (1994), Roxane Ronca (1995), Kevin Werner (1999); Daniel Vimont (2000), Michela Biasutti (2000), Craig Brown (2003), Ken Takahashi (2006), Camille Li (2007), Will Roberts (2007), Aaron Donohoe (2007), Kelly McCusker (2011), Hansi Singh (2012), Etienne Tetreault-Pinard (2013), Alex Haugsted (2017)

GRADUATE STUDENT COMMITTEES, MEMBER

App. Math: C. Thompson* (Ph. D. received 1998)
Atmos. Sciences: M. Winton* (Ph.D. received 1993), R. Foster (Ph. D 1996), D. McDermott (Ph. D. 1996), J. Barsugli* (Ph.D. 1995), P. Mote (Ph.D. 1994), E.Yulaeva (Ph.D. 1997), W. Lipscomb (Ph.D. 1998), F. Lo (M.S. 1996), P. Zuercher* (M.S. 1996), I. Durre* (Ph.D. 2000), E. Maloney (Ph.D. 2000), P. Goodman (M.S., 1996; Ph.D. 2000), J. Norris*(Ph.D. 1997), Wei Cheng* (U. Miami, Ph.D. 2000) C. Pianni (Ph.D. 1999), D. Thompson (Ph.D. 2000), E. Maloney (Ph.D. 2000), O.Babko (MS 2000), D. Groves (MS 2000), S. Eichelberger (MS 2000; PhD 2005), S. Peterson, J. Wettstein (PhD 2007), L. Bach (PhD 2007), R. Quadrelli (PhD 2004), Mario Lopez (MS 2007), K. Rennert (PhD 2007), C. Kirkman (MS 2007), J. Booth (2010), Y.-T. Hwang (2012), X. Shi, Ed Blanchard-Wrigglesworth (Ph.D. 2013), N. Feldl (Ph.D.2013), S. Evans (Ph.D 2014), H. Singh (Ph.D.2015), G. Quentin, M. Wolfe, T. Kohyama.
Civil Eng.: L. Xu* (Ph.D. received 1994), A. Baros (Ph. D. 1995). L. Bowling (2004), J. Ryu (2006).
Geology/Geophysics/ESS: D. Mohrig (Ph.D. received 1994), A. Balabin (Ph.D. 2004), G. Balco (Ph.D. received 2004), S. Rupper (2007), T. Hillebrand.
Oceanography: J. Meunch* (Ph.D. received 1995), J. Verrall (M.S. 1994), X. Yu (M.S. 1994; Ph.D. 1998), F. Stahr (M.S. 1998); J. Dawe (PhD), Young-Oh Kwon (Ph.D. 2003), J. Huber, B. Larson (PhD 2007), L. Ossiander, Alyssa Atwood (MS. 2011; PhD 2015)
Physics: T. Wyder (Ph.D. received)
(* denotes Reading Committee Member

GRADUATE STUDENT COMMITTEES, EXTERNAL MEMBER

Univ. of Colorado K. Dayem (Geophysics, PhD 2010)
Univ. Wisconsin: M. Alexander (Ph.D. 1990)
Univ. Victoria Q. Teng (Ph.D. 2004)
Miami University W. Cheng (Ph.D. 2000)
Woods Hole Oceanographic Institution M. Makowski (Ph.D. 2006)

Stockholm University M. Lofverstrom (Ph.D. 2014)
University of Copenhagen H. Kleppin (PhD 2016)
University of Bergen J. Johanessen
Oxford University J. Burley (PhD 2017)

POSTDOCTORAL FELLOWS (SPONSOR)

John Chiang (NOAA/UCAR Climate and Global Change Fellow, 2001-2002)
Susan Bates (Comer Fellow, 2007-2009),
Ian Eisenman (NOAA/UCAR Climate and Global Change Fellow, 2009-2011)
Marcel Kuettel (NSF, 2010-2011)
Qinghua Ding (NSF, 2010-2013)
Brian Rose (NOAA/UCAR Climate and Global Change Fellow, 2010-2013)
Rachel White (JISAO, 2015-present)
Andy Rhines (McDonnell, 2015-2017)
Michelle Tigchelaar (Tamaki Fellow, 2016-present)
Robb Wills (2016-present)
Stacy Carolin (2017)
Juan Boisier (2016-2017)

UNIVERSITY COMMITTEES

Interdisciplinary Committee on Global Geosciences Minor
Committee on Global and Environmental Geochemistry (GEGC), 1996-1998
Senator, Faculty Senate, Univ. of Washington, 1996-1998
Ad Hoc Committee and Interdisciplinary Earth Sciences 1997-1998
Chair, Review Committee, Program on the Environment 2002
Board Member, UW Program on Climate Change 2001-2003
College of Environment Grants Committee 2009
Faculty Search Committee, School of Marine and Environmental Affairs 2012
Advisory Board, Scandinavian Studies Bergen Exchange Program 2012-present
Member, EarthLab Steering Committee (2016 – present)

PROFESSIONAL SOCIETIES

AMS, AGU

HONORS

Whos who in the West 1995, 1996
Whos who in America 1997
Golden Citation Award (Australia) 1995
Recipient, Dept. of Atmospheric Sciences Annual Teaching Award, 1994; 1997
Houghton Lecturer, MIT 1999 (www-paoc.mit.edu/paoc/events/houghton.htm)
Keynote or Invited speaker at numerous national and international meetings, including the
annual meeting of the American Geophysical Union Annual Meeting (2002, 2003, 2004,
2008, 2009, 2011, 2012, 2013), American Quaternary Association AMQUA (2002, 2012),
the Goldschmidt Conference (2002), the Geological Society of America Annual Meeting

(2003), and the Canadian Meteorological and Oceanographic Society Annual Meeting (1995, 2011, 2015).

Distinguished Visiting Scholar, Woods Hole Oceanographic Institution, Summer 2002.

Thompson Lecturer, NCAR 2004 (http://www.asp.ucar.edu/thompson/thompson_lecture.jsp)

Fellow, American Meteorological Society

Fellow, American Geophysical Union

Professor II, Department of Geophysics, University of Bergen (January 2007 – 2012; 2015-1018)

Quay Hebrew Distinguished Lecturer, Brigham Young University (2008)

Flint Lecturer, Yale University (2008)

Henry Kendall Lecturer, MIT (2010)

Agassiz Visiting Lecturer, Harvard (2011)

Ecological Society of America Sustainability Science Award (2013) for “Seeds and Sustainability” (Ed P. Matson) (contributing author)

Carnegie Centennial Professor of Scotland (2014-2016)

H. Burr Steinbach Visiting Scholar, WHOI (2014)

Houghton Lecturer, MIT (2015)

Visiting Scholar, Harvard University (2015)

Elected to give the American Geophysical Union’s Stephen Schneider Lecture (2016)

2017 100th Anniversary of the Geophysical Fluids Institute, University of Bergen; keynote lecture