ANTHONY LEROY WESTERLING

Sierra Nevada Research Institute, 5200 Lake Rd., Merced, CA 95343 voice: 209 756 8793
awesterling@ucmerced.edu http://ulmo.ucmerced.edu

EDUCATION

University of California, San Diego
Department of Economics and School of International Relations and Pacific Studies
Joint Ph.D. 2000, Economics and International Affairs
Advisor: Dr. Gordon J. MacDonald (IRPS, deceased)
Committee: Richard T. Carson (Economics, Chair), Clive W.J. Granger (Economics, deceased), Barry J. Naughton (IRPS), Jason M. Shachat (Economics), Richard C.J. Somerville (SIO)
Dissertation: ***Climate Change and Variability, and the Role of Information in Catastrophe Insurance Markets***

University of California, Los Angeles
B.A. 1987, Economics/International Area Studies

PROFESSIONAL EXPERIENCE

Associate Professor - Environmental Engineering, School of Engineering. *UC Merced*, 2010 - present.

Associate Professor - Geography, Department of Cognitive and Information Sciences, School of Social Sciences, Humanities and Arts. *UC Merced*, 2010 - present.

Assistant Professor - Environmental Engineering, School of Engineering. *UC Merced*, 2006 - 2010.

Assistant Professor - Geography, School of Social Sciences, Humanities and Arts. *UC Merced*, 2006 - 2010.

Assistant Project Scientist - Climate Research Division, *Scripps Institution of Oceanography*, La Jolla, CA, 2004 - 2006. PI: Daniel Cayan.

Postgraduate Research Meteorologist - Climate Research Division, *Scripps Institution of Oceanography*, La Jolla, CA, 2000 - 2004. PI: Daniel Cayan

Instructor - *Graduate School of International Relations and Pacific Studies Pre-Academic Program*, International Career Associates Program, UCSD, Summer 1997 - 1998.

Graduate Student Researcher - *Graduate School of International Relations and Pacific Studies*, University of California, San Diego, 1992 - 1997. PI: Dr. Gordon J. MacDonald.

Teaching Assistant - UCSD: *International Economics* 1997 & 1994*, Managerial Economics* 1996*, Politics of International Economic Relations* 1993, *3rd College Writing Program* 1992.

Visiting Researcher - Young Scientist Summer Program, *International Institute for Applied Systems Analysis*, Laxenburg, Austria, 1996. Support: NSF/American Acad. of Arts & Sciences.

Staff Research Associate - *California Environmental Technology Center*, Scripps Institution of Oceanography, La Jolla, CA, 1994 - 1995.

Prevention Effectiveness Summer Intern - *Air Pollution and Respiratory Health Branch, National Center for Environmental Health, Centers for Disease Control*, Atlanta, GA, 1993.

Assistant General Manager and Associate Editor - *Journal of Environment & Development*, La Jolla, CA, 1991 - 1993.

Research Associate - *Economic Analysis Corporation*, Century City, CA, 1989 - 1990.

English Instructor - *Hangzhou University of Commerce*, Hangzhou, Zhejiang Province, People's Republic of China, 1988 - 1989.

State Department Summer Intern - Office of Land Transport and Maritime Affairs, Bureau of Economics, *U.S. State Department*, Washington, D.C., Summer 1987.

GRADUATE STUDENT RESEARCHERS

Alisa R. Keyser, UC Merced, Environmental Systems (Ph.D. Candidate 2009)
Kaitlin Lubetkin, UC Merced, Environmental Systems (Ph.D. Candidate 2011)

Benjamin P. Bryant, Pardee RAND Graduate School, Policy Analysis (Ph.D., Defended 2012)

PUBLICATIONS

(underlined author's were students when they contributed to the indicated publication)

Manuscripts in Preparation:

D5. Keyser, A. R., **A. L. Westerling**, "Predicting Wildland Fire Severity."

D4. **Westerling, A. L.,** A. R. Keyser, H. G. Hidalgo, D. R. Cayan, "Explaining spatial variation in forest wildfire regime response to warming."

D3. **Westerling, A. L.,** T. W. Swetnam, "Reconstructing California Wildfire 1600-2003."

D2. **Westerling, A. L.,** T. W. Swetnam, "Reconstructing Western US Forest Wildfire 1600-2003."

D1. Hamlet, A.F., **A.L. Westerling**, T.P. Barnett, and D.P. Lettenmaier: "Effects of changing 20th century precipitation variability on annual streamflow and regional hydropower resources in the Western U.S."

Hurteau, M.D., **A.L. Westerling**, C. Wiedinmyer, B.P Bryant: "Projected California Wildfire Emissions for Climate Change and Development Scenarios through 2100,"

Pierce, D.W., **A.L. Westerling**, J. Oyler: "Future Humidity Trends over the Western United States in Global Climate Models and the Variable Infiltration Capacity Hydrological Modeling System."

Manuscripts in Review:

Fleishman, Belnap, Cobb, Enquist, Ford, MacDonald, Pellant, Schoennagel, Schmit, Schwartz, Van Drunick, **Westerling**: "Chapter 8: Natural Ecosystems" ***The Southwest Climate Assessment Technical Report***, In Review.

Manuscripts in Press:

Bryant, B.P., **A.L. Westerling**: "Scenarios to Evaluate Long-term Wildfire Risk in California: new methods for considering links between changing demography, land use and climate" ***Public Interest Energy Research, California Energy Commision***, Sacramento, CA. In Review.

Peer-reviewed Publications:

C2. **Westerling**, A.L., B.P. Bryant, H.K. Preisler, T.P. Holmes, H. Hidalgo, T. Das, and S. Shrestha 2011: "Climate Change and Growth Scenarios for California Wildfire" ***Climatic Change***, 109(s1):445-463.

27. Smithwick, E. A. H., **A. L. Westerling**, M. G. Turner, W. H. Romme, M. G. Ryan 2011: Vulnerability of Landscape Carbon Fluxes to Future Climate and Fire in the Greater Yellowstone Ecosystem, ***Questioning Greater Yellowstone's Future: Climate, Land Use, and Invasive Species. Proceedings of the 10th Biennial Scientific Conference on the Greater Yellowstone Ecosystem. October 11-13, 2010, Mammoth Hot Springs Hotel, Yellowstone National Park***. C. Andersen, ed., 191-198.

C1. **Westerling, A.L., M.G. Turner, E.H. Smithwick, W.H. Romme, M.G. Ryan 2011: "Continued warming could transform Greater Yellowstone fire regimes by mid-21st Century"** ***Proceedings of the National Academy of Sciences*****, 108(32),13165-13170.** Published online before print on July 25, 2011.

25. Preisler, H.K., **A.L. Westerling**, K. M. Gebert, F. Munoz-Arriola, T. P. Holmes 2011: "Spatially Explicit Forecasts of Large Wildland Fire Probability and Suppression Costs for California" ***International Journal of Wildland Fire,*** 20 508-517.

12B. **Westerling, A. L.** 2009: "Wildfires," Chapter 8 in ***Climate Change Science and Policy,*** Schneider, Mastrandrea, Rosencranz and Kuntz-Duriseti, Eds., Island Press.[1]

24. Spracklen D. V., L. J. Mickley, J. A. Logan, R. C. Hudman, R. Yevich, M. D. Flannigan, **A. L. Westerling** 2009: "Impacts of climate change from 2000 to 2050 on wildfire activity and carbonaceous aerosol concentrations the western United States," ***Journal of Geophysical Research***, 114, D20301.

23. **Westerling**, **A. L.,** B. P. Bryant, H. K. Preisler, T. P. Holmes, H. G. Hidalgo, T. Das 2009: "Climate Change, Growth and California Wildfire" ***Public Interest Energy Research, California Energy Commission***, Sacramento, CA.

22. Bryant, B. P. and **A. L. Westerling** 2009: "Potential Effects of Climate Change on Residential Wildfire Risk in California" ***Public Interest Energy Research, California Energy Commission.*** Sacramento, CA.

21. Littell, J. S., D. McKenzie, D. L. Peterson, and **A. L. Westerling** 2009: "Climate and Wildfire Area Burned in Western U.S. Ecoprovinces, 1916-2003," ***Ecological Applications***.

20. Bryant, B.P., **A.L Westerling** 2009: *AIGIS: Areal Interpolation for GIS data*, **Comprehensive R Archive Network**, contributed software package for R.

9(a). Westerling, A.L., H.G. Hidalgo, D.R. Cayan, T.W. Swetnam: "Warming and Earlier Spring Increases Western U.S. Forest Wildfire Activity" republished with commentary in ***Science Magazine's State of the Planet 2008-2009***. Island Press. Donald Kennedy, Ed. ISBN 1-59726-405-9. *Pub. Date: 12/18/2008*

19. Jaffe, D., W. Hafner, D. Chand, **A. L. Westerling**, D. V. Spracklen 2008: "Interannual Variations in PM2.5 due to Wildfires in the Western United States," ***Environmental Science and Technology***, 42: 2812-2818. DOI:10.1021/es702755v

18. Jaffe, D., D. Chand, W. Hafner, **A. L. Westerling**, D. V. Spracklen 2008: "Influence of Fires on O^3 Concentrations in the Western U.S.," ***Environmental Science and Technology,*** 42(16), 5885-5891, DOI:10.1021/es800084k.

17. **Westerling, A. L.**, 2008: "Climatology for Wildfire Management," Chapter 6 in ***The Economics of Forest Disturbances: Wildfires, Storms, and Invasive Species,*** Series: Forestry Sciences, Vol 79. T.P. Holmes, J.P. Prestemon and K.L. Abt, Eds., XIV, 422 p. Springer. ISBN: 978-1-4020-4369-7

16. Holmes, T. P., R. J. Hugget and **A. L. Westerling**, 2008: "Statistical Analysis of Large Wildfires," Chapter 4 ***The Economics of Forest Disturbances: Wildfires, Storms, and Invasive Species,*** Series: Forestry Sciences, Vol 79. T.P. Holmes, J.P. Prestemon and K.L. Abt, Eds., XIV, 422 p. Springer. ISBN: 978-1-4020-4369-7

15. Preisler, H. K., S. C. Chen, F. Fujioka, J. W. Benoit, **A. L. Westerling**, 2008: "Wildland fire probabilities estimated from weather model-deduced monthly mean fire danger indices," ***International Journal of Wildland Fire,*** 17:305-316. DOI: 10.1071/WF06162

14. Corringham, T., **A. L. Westerling**, B. Morehouse 2008: "Exploring Use of Climate Information in Wildland Fire Management: A Decision Calendar Study, "***Journal of Forestry,*** 106(2): 71-77.

13. **Westerling, A. L.** and B. P. Bryant 2008: "Climate Change and Wildfire in California," ***Climatic Change, 87: s231-249.*** DOI:10.1007/s10584-007-9363-z.

12(a). **Westerling, A. L.** 2007: "Los incendios en el oeste de los EEUU y el cambio climatico" Chapter 2 in ***Prevencion de los Desastres Ambientales: Una reflexion critica,*** Ruiz de Elvira, Ed., (Spanish edition of immediately preceding publication).

12. **Westerling, A. L.** 2007: "Os incendios no oeste dos EEUU e o cambio climatico" Chapter 2 in ***Prevendo os Desastres Ambientais: Unha reflexion critica***, Ruiz de Elvira, Ed., Monographias 06: Escola Galega de Administracion Publica, Santiago de Compostela, Galicia. ISBN 9788445344309..

11. Spracklen, D. V., J. A. Logan, L. J. Mickley, R. J. Park, R. Yevich, **A. L. Westerling**, and D. Jaffe 2007: "Wildfires drive interannual variability of organic carbon aerosol in the western U.S. in summer," ***Geophysical Research Letters***, 34, L16816. DOI:10.1029/2007GL030037.

[1] Note that this is the English version of number 12.

10. Preisler, H.K., and **A.L. Westerling** 2007: "Statistical Model for Forecasting Monthly Large Wildfire Events in the Western United States" ***Journal of Applied Meteorology and Climatology***, 46(7): 1020-1030.

9. **Westerling, A.L.**, H.G. Hidalgo, D.R. Cayan, T.W. Swetnam 2006: "Warming and Earlier Spring Increases Western U.S. Forest Wildfire Activity" ***Science***, 313: 940-943. * *Online supplement* *

8. Shachat, J., and **A.L. Westerling** 2006: "Information Aggregation in a Catastrophe Futures Market," ***Managerial and Decision Economics***, 27: 477-495.

7. **Westerling, A.L.** and B.P. Bryant 2006: "Climate Change and Wildfire In and Around California: Fire Modeling and Loss Modeling," ***Public Interest Energy Research, California Energy Commission. CEC-500-2005-190-SF***, Sacramento, CA.

6. **Westerling, A.L.**, D.R. Cayan, T.J. Brown, B.L. Hall and L.G. Riddle 2004: "Climate, Santa Ana Winds and Autumn Wildfires in Southern California," ***EOS***, 85(31): 289,296.

5. Brown, T.J., B.L. Hall and **A.L. Westerling** 2004: "The Impact of Twenty-first Century Climate Change on Wildland Fire Danger in the Western United States: An Applications Perspective," ***Climatic Change***, 62: 365-388.

4. **Westerling, A.L.** and T.W. Swetnam 2003: "Interannual to Decadal Drought and Wildfire in the Western United States," ***EOS***, 84(49): 545,554-5.

3. **Westerling, A.L.**, T.J. Brown, A. Gershunov, D.R. Cayan and M.D. Dettinger, 2003: "Climate and Wildfire in the Western United States," ***Bulletin of the American Meteorological Society***, 84(5) 595-604.

2. **Westerling, A.L.**, A. Gershunov, D.R. Cayan and T.P. Barnett, 2002: "Long Lead Statistical Forecasts of Area Burned in Western U.S. Wildfires by Ecosystem Province," ***International Journal of Wildland Fire***, 11(3,4) 257-266.

1. **Westerling, A.L.**, 1992: "Climate Change and Chinese Energy Policy," ***Journal of Public and International Affairs,*** 3:71-90.

Other Published Writings

Westerling, A.L. 2012: "Fire: Are we facing an increase in wildfires?" PAGES news, 20(1):24-25.

Westerling, A.L. 2011: "Brevia: Climate Change Could Rapidly Transform Greater Yellowstone Fire Regimes" ***Mountain Views: The Newsletter of the Consortium for Integrated Climate Research in Western Mountains (CIRMOUNT)***, 5(2):30-32.

26. Smithwick, E.A.H., A.L. Westerling, M.G. Turner, W.H. Romme, M.G. Ryan 2009: ***Climate, Fire and Carbon: Tipping Points and Landscape Vulnerability in the Greater Yellowstone Ecosystem,*** Final Report 09-3-01-47, Joint Fire Sciences Program.

44. Preisler, H.K., and **A.L. Westerling** 2005: "Estimating Risk Probabilities for Wildland Fires," ***Proceedings of the 2005 Joint Statistical Meetings***, Minneapolis, MN.

42. Shachat, J., and **A.L. Westerling** 2004: "Information Aggregation in Catastrophe Reinsurance Markets," ***Economics Working Paper Archive***, Experimental Series #0403002. Washington University Economics Department.

41. Dettinger, M.D., D.R. Cayan, N.K. Knowles, **A.L. Westerling**, M.K. Tyree, 2004: "Recent Projections of 21st-Century Climate Change and Watershed Responses in the Sierra Nevada. USDA Forest Service Gen. Tech. Rep. PSW-GTR-193. Conference proceeding for the Sierra Nevada Science Symposium, Oct 7-10, 2002, Kings Beach, California.

38. **Westerling, A.L.**, A. Gershunov and D.R. Cayan, 2003: "Statistical Forecasts of the 2003 Western Wildfire Season Using Canonical Correlation Analysis," ***Experimental Long-Lead Forecast Bulletin***, 12(1,2).

35. **Westerling, A.L.**, A. Gershunov and D.R. Cayan, 2001: "Statistical Forecasts of Western Wildfire Season Severity," ***Proceedings of the 4th Symposium on Fire and Forest Meteorology***, Reno, Nevada, November 2001, pp 202-205

34. **Westerling, A.L.**, D.R. Cayan, A. Gershunov, M. D. Dettinger and T. J. Brown, 2001: "Statistical Forecast of the 2001 Western Wildfire Season Using Principal Components Regression," ***Experimental Long-Lead Forecast Bulletin***, 10:71-75.

30. **Westerling, A. L.**, (2000), "Calculating Risks? The Spatial and Political Dimensions of Hazardous Waste Policy, by J. T. Hamilton and W. K. Viscusi," Journal of Economic Literature, 38, 684-686. Book Review.

Abstracts

43. **Westerling, A. L.**, D. R. Cayan, T. J. Brown, B. L. Hall, L. G. Riddle, (2005) "Antecedent Climate, Santa Ana Winds and Autumn Wildfires in Southern California," AMS Conference on Hydrology, Vol. 19, (np).

40. Alfaro, E., **Westerling, A. L.**, Cayan, D.R., (2004), "Climate and Wildfire in Mountains of the Western United States," Eos Transactions AGU, Fall Meeing Supplement, Abstract U51A-07.

39. **Westerling, A. L.** and T. W. Swetnam, (2004), "A Long Term Perspective on Decadal Variability in Climate and Wildfire in the Western United States," Eos Transactions AGU, Fall Meeting Supplement, Abstract B43E-04.

37. Holmes, T. P., and **A. Westerling**, (2003), "A Century of Fire and Land Management in the Southern Sierra Nevada," Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress and Fifth Symposium on Fire and Forest Meteorology, Orlando, Florida, October 2003.

36. **Westerling, A. L.**, K. Gebert, G. Jones, K. Abt, J. Prestemon, A. Gershunov (2003), "Long Lead Statistical Forecasts of Wildland Fire Suppression Costs," Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress and Fifth Symposium on Fire and Forest Meteorology, Orlando, Florida, October 2003.

33. **Westerling, A. L.**, (2001), "Climatology of Western Wildfire and Experimental Long-Range Forecasts of Wildfire Season Severity," In 2001 Fire & Climate Workshops Proceedings, Tucson, Arizona, 2001. Gregg Garfin and Barbara Morehouse, Editors.

32. **Westerling, A. L.**, A. Gershunov, D. R. Cayan, and T. J. Brown, (2001), "A Western United States Fire Climatology," In Proceedings of the American Meteorological Society Symposium on Climate Variability, the Oceans and Societal Impacts, Albuquerque, New Mexico, 2001.

31. **Westerling, A. L.**, (2001), "Climate Variability and Large Storm Surge on the Pacific Coast of the United States," In Proceedings of the American Meteorological Society Symposium on Climate Variability, the Oceans and Societal Impacts, Albuquerque, New Mexico, 2001.

29. **Westerling, A.**, (2000), "El Niño and One Hundred Years of Storm Surge in the Eastern North Pacific," Proceedings of the 16th Annual Pacific Climate Workshop, Santa Catalina Island, California, 1999.

Data Sets

Westerling, A. L., Western North American Large Fire History
Integrates U.S. Federal and State fire records for 11 western contiguous states and Alaska with Canadian Provincial fire records. Unpublished.

Westerling, A. L., Large Western U.S. Forest Fires > 1000 Acres, 1970 – 2003.
Large forest fire history for western Park and Forest Service land management units reporting consistently from 1970 on. Described in Westerling et al 2006 (Science, Online supplement)

Westerling, A. L., 1-Degree Gridded Federal Fire History for Western U.S., 1980 – 2004.
Updated annually through 2004. Described in Westerling et al (2003).

GRANTS AND CONTRACTS

In Process
Co-PI: *Collaborative Research: Will changing climate and fire regimes fundamentally alter forests of the Rocky Mountains?* $2,000,000. 2013-2017. **NSF**. Submitted.

at UC Merced
Co-PI: *Integrated effects of climate and management on western US forest wildfire and vegetation.* $750,000 (Total. Penn State Prime). 2012-16. **USDA AFRI.**

Co-PI: *California-Nevada Applications Program (Recompete).* $3,000,000 (Total. UCSD prime). 2012-17. **NOAA.**

Co-PI: *California-Nevada Applications Program (2010-2012).* $700,000 (Total. UCSD prime). 2010-12. **NOAA.**

Co-PI: *California-Nevada Applications Program (National Assessment).* $315,000 (Total. UCSD prime). 2010-12. **NOAA.**

Co-PI (with Professor Kueppers at UC Merced): *Senate Faculty Research Award: Causes of Hydrologic Consequences of Conifer Encroachment Into High-Elevation Sierran Meadows* $9,997 (total). 2011. **UC Merced**

Contractor: *Collaborative Research: CRI-EaSM Multiscale Modeling of Aerosol Indirect Effects on Decadal Timescales.* $3,000,000 (Total. UCSD prime). 2010-14. **NSF** (with EPA, DOE).

PI: *Senate Research Award.* $1,250 (total). 2010-present. **UC Merced**

PI: *Gridded Seasonal Wildfire Outlook for the Western United States.* $75,000 (total). 2010-2012. **US Forest Service, National Wildfire Coordinating Group**

Co-PI: *California Vulnerability and Adaptation Study.* $4,343,489 (total UC). 2010-2011. **California Energy Commission**

Co-PI: *Climate, Fire and Carbon: Tipping Points and Landscape Vulnerability in the Greater Yellowstone Ecosystem.* $140,653. 2009-2010. **Joint Fire Sciences**

PI*: Climate Change Impacts for California Wildfire.* $70,000. 2008-2009. *subcontract:* **California Energy Commission**/PIER/California Climate Change Center

PI: *Extreme Value Statistics for Forest Wildfire.* $25,000. 2007-2011. **USDA Forest Service** Southern Research Station.

PI: *Great Valley Climate Almanac*. $20,804. 2006- 2007. **Great Valley Center/Hewlett**.

PI: *CEC/Barnett Research Subcontract*. $72,000. 2006-2007. Scripps Institution of Oceanography/**California Energy Commission**

PI: *CAP Research Subcontract*. $205,000. 2006-2009. Scripps Institution of Oceanography/**NOAA OGP**

PI: *Fire Research at a Landscape Scale*. $250,000. 2006 - 2011. **USDA Forest Service** PSW

at Scripps Institution of Oceanography

Co-I (PI T. Barnett)*: Climate Forecasts for Improving Management of Energy and Hydropower Resources in the Western United States*. $400,000. 2005-2007. **NOAA CDEP**

Co-I (PI T. Barnett): *Climate Forecasts for Improving Management of Energy and Hydropower Resources in the Western United States*. $200,000. 2005-2008. **California Energy Commission**.

Co-I (PI D. Cayan): *Assessing Potential Impacts of Climate Change on California*. $480,000. August 17, 2005 – May 17, 2006. **California Energy Commission**

Co-I (PI D. Cayan): *California Applications Program.* $520,000. May 1, 2005 – Dec 1, 2005. **NOAA OGP**

PI: *Regional Predictions of Annual Area Burned for the U.S. Forest Service*. $22,000. 2005 - 2008. **USDA Forest Service**: National Fire Plan Grant via Rocky Mountain Research Station.

PI: *Incorporating Vegetation Management into Wildfire Area Burned Models*. $36,000. 2003 - 2005. **USDA Forest Service**: National Fire Plan Grant via Southern Research Station

PROFESSIONAL ACTIVITIES AND SERVICE

Professional Association Memberships

American Geophysical Union
International Association of Wildland Fire
Association for Fire Ecology
American Association for the Advancement of Science

Sigma Xi, The Scientific Research Society (treasurer'07-09, vice-president '09-'10, president '10-'11, UC Merced Chapter Charter member)

University Service - UC Merced

UC Merced Academic Senate Committee on Committees member, 2009 - 2011
Environmental Systems Graduate Group Educational Policy Committee Chair, 2009 - present
Sierra Nevada Research Institute Advisory Committee member, 2008 - present
UC Merced Campus-wide Academic Strategic Planning Committee member, 2007 - 2008.
Chair, Sustainability Science Search Committee (Assistant/Associate Professor) 2006 - 2007.
Chair, Environmental Systems Grad Group Admissions Committee, 2006 - 2008 (2007-08 Chair)
Management Search Committee (Assistant Professor) 2006 - 2007.
Management Search Committee (Senior) 2006 - 2007.
Graduate Research Council, UC Merced Academic Senate 2006 - 2008.
UC-wide California Climate Solutions Institute proposal to the PUC. UC Merced faculty representative with Roger Bales.

Ad Hoc Reviewer - Manuscripts

Can J Forest Res, Ecol, Int J Wildland Fire, Global Change Bio, Global Ecol Biogeogr, GRL, B Am Meteorol Soc, Forest Sci, J Geophys Res–Atmos, West N Am Naturalist, Ecol Model, Ecol Appl, Int J Climatol, J Climate, J Agr Forest Meteorol, Climatic Change, Weather and Forecasting, PNAS, Phys. Geog., etc.

Ad Hoc Reviewer - Career

USDA Forest Service

Ad Hoc Reviewer - Grants

NOAA, NSF

Public and Professional Service

State of California and the Pacific Council on International Policy, Climate Adaptation Advisory Panel, November 2009 - June 2010, Fire sub-panel Team-Leader.

Sigma Xi Research Society, Merced Chapter, Spring Symposium, Climate Change Science and Governance, 15 April 2010, Merced, CA, symposium organizer.

National Academy of Sciences Workshop on Strategic Advice on CCSP 19-20 March 2008, Boulder, Colorado, participant.

U.S. House of Representatives, Committee on Appropriations, Subcommittee on Interior, Environment, and Related Agencies, 12 February 2008, Washington D.C., Hearing: Wildland Fire Management, invited testimony.

Environmental and Energy Study Institute Briefing, Effects of Climate Change on Forest Resources, 11 February 2008, Washington D.C., Climate Change Impacts on Western Forest Wildfire, invited briefing.

National Academy of Sciences Board on Atmospheric Sciences and Climate Meeting, 12-13 November 2007 Irvine, CA. Climate Services in California and Technology Transfer from Academia, Invited Presentation.

U.S. Senate, Committee on Energy and Natural Resources, Hearing: Impacts of Global Climate Change on Wildfire Activity in the United States, 24 September 2007, Washington D.C., invited testimony, with Dr. Swetnam.

U.S. House of Representatives, Committee on Natural Resources, Subcommittee on Energy and Mineral Resources, Oversight Hearing, 20 March 2007, Longworth House Office Building, Washington, DC, Hearing: Towards a Clean Energy Future: Energy Policy and Climate Change on Public Lands, Invited testimony.

National Academy of Sciences Workshop on the Impacts of Climate Change on Federal Lands, 2-3 November 2006, National Academies, Washington, DC, Forest Ecosystems Panel, Invited Panelist.

American Meteorological Society Environmental Science Seminar Series: Drought, Water, Wildfires and Climate Change in the Western US - Historical Context and the Road Ahead, 25 September 2006, Russell Senate Office Building, Washington, DC, Climate Change and Forest Wildfire in the Western US, invited briefing. http://www.ametsoc.org/atmospolicy/environmentalsssarchives.html

Climate Change Briefing for **California State Senator Kehoe** 13 July 2006

Media (view link...)

http://www.google.com/search?client=safari&rls=en&q=westerling+climate+fire&ie=UTF-8&oe=UTF-8

Discovery Channel *Hot Planet*, 2008 documentary

NPR *Science Friday*, 2006 radio show

ABC News *What's Fanning Wildfires?* 2006 special

Thomson Scientific Fast-breaking Paper in the Geosciences

Google Earth: Cal-Adapt: Potential Changes in Wildfire Regimes in California

Presentations, Workshops, Panels, Seminars...

Willowbridge Bookstore, Public Seminar, 11 February 2012, Oakhurst, CA, Climate Change and Extreme Fire Seasons in the Southern Sierra, invited presentation.

California Department of Water Resources, Los Angeles County Department of Public Works Headquarters, Alhambra, CA, Department of Water Resources Workshop, 31 January 2012, Alhambra, CA, Climate Change and Wildfire Extremes, invited presentation.

California Climate Change Center, Scripps Institution of Oceanography, Vulnerability and Adaptation to Extreme Events in California in the Context of a Changing Climate: New Scientific Findings, 13 December 2011, La Jolla, CA, Climate Change and Wildfire Extremes, invited presentation.

American Geophysical Union, Fall Meeting, December 2011, San Francisco, CA, Effects of climate change on climatic water deficit and wildfire in Greater Yellowstone Ecosystem forests

Department of Interior, National Park Service, 30 November 2011, Interior Building, Washington, D.C., Climate and Wildfire in the Western US.

NOAA Climate Program Office, 30 November 2011, Silver Spring, MD, Climate and Wildfire in the Western US.

SERDP/ESTCP Partners in Environmental Technology Technical Symposium and Workshop: Meeting DoD's Environmental Challenges, Role of Fire in the Carbon Cycle under Climate Change, November 2011, Washington, D.C., Climate Chang Fuels and Wildfire, invited presentation.

Fisheries and Wildlife Service, Annual Fire Management Officers Meeting, November 2011, San Luis National Wildlife Refuge, Los Banos, CA, Climate and Wildfire in the Western US, invited presentation.

Public Interest Energy Research, California Institute for Energy & Environment, Bay Area Vulnerability and Adaptation Meeting, 26 September 2011, University of California, Berkeley, CA, Bay Area Wildfire Scenarios, invited presentation.

US Climate Variability and Prediction Research Program/National Corporation for Atmospheric Research Advanced Study Program Researcher Colloquium, June 2011, Boulder, CO, Western US Climate and Fire Extremes: Issues in scale, uncertainty, systems interactions and thresholds, invited presentation.

The Yosemite Forum, May 2011, Yosemite National Park, CA, Managing Fire in a Changing Climate: A tale of two parks, invited presentation.

University of California Center Sacramento Public Policy Seminar, March 2011, Sacramento, CA, Climate Change and Wildfire in the Sierra Nevada, invited presentation.

Southern Sierra Fire Management Scenario Planning Pilot Project, National Parks Service, Southern Sierra Fire Management Alternatives Workshop, February 2011, Fresno, CA, Fire-Climate connections in the southern Sierra Nevada, invited presentation.

California Energy Commission, Second Coordination Meeting, Vulnerability and Adaptation Study, February 2011, Sacramento, CA, Adaptation Strategies for Climate Change Impacts on Wildfire in California, invited presentation.

University of California, Merced, Environmental Systems Graduate Seminar, February 2011, Fire regime effects of anthropogenic changes in Rocky Mountains Climate and Hydrology, invited presentation.

Yellowstone Biennial Conference, October 2010, Mammoth Hot Springs, Yellowstone National Park, Fire Regime Effects of Anthropogenic changes in Rocky Mountains Climate & Hydrology

Chancellor's Task Force on Community Engaged Scholarship, UC Merced Conference on Community Research and Scholarship, October 2010, Merced, CA, Fire Science for Western U.S. Land Managers, invited presentation.

Geneva Association, MORE 24 Seminar, June 2010, Bermuda Underwater Exploration Institute, Hamilton, Bermuda, Wildfire Risk Map, invited presentation.

National Park Service, Yosemite Fire Science Symposium, April 2010, Yosemite National Park, CA, Climate Change Impacts on Wildfire in the Sierra Nevada, invited presentation.

UC Davis, Land, Air and Water Resources, 2010 Seminar Series, 27 January 2010, Davis, CA, Climate and Wildfire in California and the Western US, invited seminar.

American Geophysical Union, Fall Meeting, 15 December 2009, Fire Regime and Ecosystem Effects of Climate-driven Changes in Rocky Mountains Hydrology, contributed presentation.

World Association of Former United Nations Interns and Fellows, Innovation Talks II: Climate Change, Disaster Response, and Public-Private Partnerships, 19 November 2009, Trusteeship Council Chambers, United Nations Headquarters, New York, NY. Climate Change

and Wildfire: Policy Formulation for Peace, Security and Sustainable Development, invited presentation.

Pacific Council on International Policy, California's Adaptation to Climate Change Task Force Meeting II, 10 November 2009, San Francisco, CA, Fire and Climate in the West: Assessing the Threat, invited presentation.

The Nature Conservancy and USDA Forest Service; Fire, Landscapes and People Collaboration; Forging Fire Alliances in a Changing Climate, 3-4 November 2009, Arlington, VA, Perspectives on Fire and Climate in the Western US: 1600-2099, invited luncheon speaker.

UC Merced Cognitive and Information Sciences, Mind, Technology and Society Seminar Series, 19 October 2009, Merced, CA, Statistical Analysis and Modeling of Climate-Wildfire-Vegetation Interactions in California and the Western US, invited presentation.

Yosemite National Park, Yosemite Hydroclimate Conference, 8 October 2009, Yosemite Valley, CA, Implications of the 2008 California Climate Change Impact Assessment for Wildfire in the Sierra Nevada, contributed presentation.

UC Merced, Environmental Systems Seminar, 23 September 2009, Merced, CA, Climate Change, Growth and California Wildfire Risk, invited seminar.

California Energy Commission, California Climate Change Conference, 20 September 2009, Sacramento, CA, Potential Effects of Climate Change on Residential Wildfire Risk in California, invited presentation.

California Energy Commission, California Climate Change Conference, 10 September 2009, Sacramento, CA, Changes in Fire Extent and Frequency Under Climate Change and Increased Urbanization, invited presentation.

California Energy Commission, California Climate Action Team Public Meeting on California Climate Science, 20 April 2009, Scripps Institution of Oceanography, La Jolla, CA, Climate Change Impacts on Forestry and Wildfire, invited presentation.

Tahoe Science Consortium, 2009 Climate Change Symposium, 17 March 2009, Tahoe, CA, Climate Change Impacts on Wildfire, invited presentation.

Stanford University Bill Lane Center for the American West and Woods Institute for the Environment, How the West was Spun Colloquium, Wildfires in the West Forum, 15 January 2009, Stanford, CA, Projecting Climate Change Impacts on Wildfire, invited presentation.

American Geophysical Union, 2008 Fall Meeting, 16 December 2008, San Francisco, CA, Projecting Climate Change Impacts on Wildfire Probabilities, invited presentation.

International Association of Wildland Fire, The '88 Fires: Yellowstone and Beyond, 24 September 2008, Jackson Hole, WY, Climate Change and Forest Wildfire in the Western U.S., invited plenary presentation.

California Energy Commission, CalEPA and California Resources Agency, Fifth Annual California Climate Change Conference, 10 September 2008, Sacramento, CA, Mapping Vulnerability to Wildfire: Property Losses and Suppression Costs, invited presentation.

USDA Forest Service Pacific Southwest Research Station, Sierra Nevada Science Symposium, 4 September 2008, Visalia, CA, Climate Change and Forest Wildfire in California, invited presentation.

California Energy Commission Public Interest Energy Research Climate Change Research Program and California Department of Fish and Game, Seminar on Climate Change and

Ecological Resources in California, 6 June 2008, Sacramento, CA, Climate Change and Wildfire in California, invited presentation.

National Interagency Coordination Center 2008 Seasonal Assessment, 21 April 2008, Boulder, CO, Experimental Seasonal Wildfire Forecast for California, invited, with H. Preisler.

Association for Fire Ecology, Annual Awards Banquet Dinner, 30 January 2008, Tucson, AZ, Climate Change Impacts on Western Wildfire Regimes, invited keynote presentation.

American Geophysical Union, Fall Meeting 10-14 December 2007, San Francisco, CA, Reevaluation of the spring onset/fire association in the western U.S. using Phenological vs. Hydrological Models, with Julio Betancourt and Mark Schwartz, contributed presentation.

Air Resources Board site visit, 28 November 2007, UC Merced, CA, Fire & Climate Research Applications for California and the West, presentation.

Spanish Royal Academy of Sciences, Fundacion Ramon Areces, Incendios forestales: ¿lucha o adaptacion? 3 October 2007, Madrid, Spain, Climate Change Impacts on Fire Regimes, invited presentation.

Frontiers of Science and Engineering Seminar Series, Challenger Learning Center, Castle Science and Technology Center and Castle Air Museum, 15 September 2007, Atwater, California. Climate Change and Wildfire in the West, invited presentation.

Pacific Climate Workshop, May 2007, Asilomar, CA, Climate Change and Wildfire, contributed presentation.

NOAA Regional Integrated Science and Assessment PI Meeting, 27 February - 1 March 2007, Del Mar, California. Invited participant and panelist (Panel: Evaluating the benefits that RISAs bring to a region/set of stakeholders).

American Association for the Advancement of Science Annual Meeting, Science and Technology for Sustainable Well-Being, 15-19 February 2007, San Francisco, CA, Controversies in Forest Fire Suppression and Management, "Effects of Climate on Fire," contributed presentation with Haiganoush Preisler. Co-presenter.

Rocky Mountain Research Station and National Interagency Fire Center Meeting: "Suppression Cost Forecasting: Improving the Methodology," 2 February 2007, Pacific Southwest Research Station, Albany, CA. Invited to help organize development of improved fire suppression forecasts for Federal fire management. Invited presentation.

Xunta de Galicia e Escola Galega de Administracion Publica, Xornadas Prevendo os Desastres Ambientais: Unha Reflexión Crítica, 18 January 2007, Santiago de Campostela, Galicia, Spain. "A influencia da variabilidade e o cambio climáticos sobre os incendios no oeste dos EUA," invited presentation. Honorarium. http://egap.xunta.es/detalleRecurso.php?id=254

Association for Fire Ecology, 3rd International Fire Ecology and Management Congress, 13-17 November 2006, San Diego, CA, Session: Advances in Fire Climatology: Using Modern and Paleofire Data to Understand Long-Term and Broad-Scale Fire Regime Changes in Western North America, "Applied Dendrochronology for Fire Management in the Western United States." contributed presentation.

Association for Fire Ecology, 3rd International Fire Ecology and Management Congress, 13-17 November 2006, San Diego, CA, Plenary Session, "Climate, Forest and Fire Regime Changes in the Western US." Thomas Swetnam presenting. Invited presentation co-author.

Climate Impacts Group, University of Washington, CIG Seminar Series, 9 November 2006, Seattle, WA, "Climate and Forest Wildfire in the Western US," invited seminar. http://www.cses.washington.edu/cig/outreach/seminarfiles/2006seminars/calendarfall06.shtml

Modesto Junior College, Kick-back Science Seminar, 12 October 2006, Modesto, CA, "Climate Change and Forest Wildfire in the Western US," invited presentation.

Consortium for Integrated Climate Research on Western Mountains, MTNCLIM Workshop, 22 September 2006, Mt. Hood, OR, "Explaining Spatial Variability in Forest Wildfire Regime Response to Warming Temperatures and an Earlier Spring Snowmelt." Contributed presentation with M. Dettinger, H. Hidalgo, T. Swetnam. http://www.fs.fed.us/psw/mtnclim/talks/list.shtml

California Energy Commission, 2nd Climate Change Science Workshop, 15 September 2006, Sacramento, CA, "Climate and Forest Wildfire in the Western United States: recent trends and projections," invited presentation. http://www.climatechange.ca.gov/events/2006_conference/presentations/index.html

7th International Conference on Dendrochronology, 15 June 2006, Beijing, China, "Applied Dendrochronology for Fire Management in the Western United States." Invited presentation in Session 10: Applications of Dendrochronology to Resource Management. http://7thicd.ibcas.ac.cn/Final_Program.htm

National Interagency Coordinating Center, National Seasonal Assessment Workshop – Western States and Alaska, 4 April 2006, Boulder, CO, "Statistical Wildfire Forecasts for 2006: transition and uncertainty," invited presentation with H. Preisler.

NOAA Climate Prediction Applications Science Workshop: Research and Applications on Use and Impacts, 21 March 2006, Tucson, AZ, "Evolving Partnerships for Integrating Climate and Forecast Information into Fire Management Planning," presentation. http://www.nws.noaa.gov/ost/climate/STIP/CPASW06/

University of California, Merced Job Candidate Seminar, 8 March 2006, Merced, CA, "Trends in Large Wildfires in Western U.S. Forests Since 1970: effects of changes in the timing of Spring, " invited presentation.

University of Arizona GRD/Udall Job Candidate Seminar, 17 January 2006, Tucson, AZ, "Trends in Large Wildfires in Western U.S. Forests Since 1970: effects of changes in the timing of Spring, " invited presentation.

California Climate Action Team Workshop, Scenario Analysis Subgroup Meeting, 13 December 2005, Sacramento, CA, "Potential Impacts on Wildfire Risk," invited presentation. http://www.climatechange.ca.gov/climate_action_team/meetings/2005-12-13_meeting/index.html

Climate Change Science Program Workshop, Climate Science in Support of Decision Making, 14 November 2005, Arlington, VA "Climate Forecasts for Improving Management of Energy and Hydropower Resources in the Western U.S.," contributed presentation with T. Barnett, D. Pierce, E. Alfaro, A. Gershunov, D. Lettenmaier, A. Hamlet, N. Voisin, A. Steinemann, Ross Gutromson, Ning Lu.http://www.climatescience.gov/workshop2005/presentations/default.htm

Fire History and Climate Synthesis in Western North America, 30 April 2005, Flagstaff, AZ, "Linking Modern and Paleo Fire and Climate Data," plenary discussion leader with Thomas Swetnam.

Fire History and Climate Synthesis in Western North America, 30 April 2005, Flagstaff, AZ, "Western North America Fire Occurrence Data," invited presentation.

Fire History and Climate Synthesis in Western North America, 30 April 2005, Flagstaff, AZ, "Climate and Wildfire in Western North America," invited presentation with Thomas Swetnam and Daniel Cayan.

NOAA Office of Global Programs, RISA Speaker's Series, 15 April 2005, Silver Springs, MD, "California's Vulnerability to Climate Variability and Change and CAP's Efforts to Assist Decision Makers on Water Resources, Wildfire and Human Health Issues," invited presentation with Daniel Cayan.

National Interagency Coordination Center National Seasonal Assessment Workshop: Western States and Alaska 2005, 29 March 2005, Boulder, CO, "Preliminary 2005 Forecast and Forecast Assessment," invited presentation.

Consortium for Integrated Climate Research in Western Mountains, MNTCLIM 2005: Anticipating Challenges to Western Mountain Ecosystems and Resources, 1-4 March 2005, Pray, MT, "Trends in Climate Since 1970 and the Response in High Elevation Forest Wildfire Regimes in the Western United States," contributed poster presentation with Daniel Cayan and Hugo Hidalgo.

American Meteorological Society 2005 Annual Meeting, 11 January 2005, San Diego, CA, "Coastal Southern California Wildfire, Antecedent Climate, and Santa Ana Winds," contributed presentation with Cayan, Brown, Hall, and Riddle. http://ams.confex.com/ams/Annual2005/techprogram/session_17945.htm

American Geophysical Union 2004 Fall Meeting, 16 December 2004, San Francisco, CA, "Climate and Wildfire in the Mountains of the Western United States," contributed presentation with Eric Alfaro, Daniel Cayan, Michael Dettinger, and Hugo Hidalgo in session U51A: Challenges to Mountain Water Resources and Ecosystems I

American Geophysical Union 2004 Fall Meeting, 16 December 2004, San Francisco, CA, "A Long-Term Perspective on Decadal Variability in Climate and Wildfire in the Western United States," contributed presentation with Thomas Swetnam in Session B43E: Fire, Climate, and Ecosystems II

UCSD Department of Economics, UCSD Environmental Resource Group Weekly Luncheon Seminar, 18 October 2004, La Jolla, CA, presentation "Seasonal Forecasts of Wildland Fire Area Burned and Suppression Costs for Fire Management Applications."

Western Coalition of Arid States WESTCAS Summer Legislative Conference, 24 June 2004, San Diego, CA, invited presentation "Drought and Wildfire in the Western U.S."

CIRCMONT Mountain Climate Sciences Symposium, 25 - 27 May 2004, North Lake Tahoe, CA, participant and discussion recorder, Session 3: Drivers of Change.

Risk Prediction Initiative Workshop: Fires at the Wildland-Urban Interface: What does the future hold? 19 May 2004, Bermuda Underwater Exploration Institute, Hamilton, Bermuda, invited presentation: "Antecedent Climate and Seasonal Wildfire Forecasting"

University of California Extension, Joint Meeting of the Oak Woodland, Forestry, Fire and Monitoring Workgroups, 5 - 6 May 2004, San Diego, CA, invited presentation: "Climate and Wildfire in California"

Universidad de Alcala de Henares, 27 April 2004, Alcala, Spain, invited seminar: "Towards a Long-Term Perspective on Wildfire in the Western United States"

II International Symposium on Fire Economics, Planning & Policy: A Global Vision, 20 - 22 April 2004, Cordoba, Spain, contributed presentation: "A Long-Term Perspective on Wildfire Season Severity in the Western United States", with Thomas Swetnam and Krista Gebert.

National Interagency Coordinating Center National Seasonal Assessment Workshop - Western States and Alaska, 30 March 2004, Phoenix, AZ, invited presentation: "2004 Wildfire Season: Statistical Forecasts of Area Burned"

21st Annual Pacific Climate Workshop: Coastal Climates and Issues, 28-29 March 2004, Asilomar, CA, contributed paper presentation "Coastal Southern California Wildfire, Antecedent Climate, and Santa Ana Winds" with Daniel Cayan, Tim Brown, Beth Hall, and Larry Riddle.

Scripps Environmental Advocates Monthly Meeting, 17 March 2004, Scripps Institution of Oceanography, La Jolla, CA, invited seminar: "Western Wildfire: Dimensions of the Problem."

American Meteorological Society 5th Symposium on Fire and Forest Meteorology & Society of American Foresters 2nd International Fire Ecology and Fire Management Congress joint session: Assessing and Predicting Climate Impacts on Landscapes. 16 - 20 November 2003, Orlando Florida, contributed presentation "Long lead statistical forecasts of wildland fire suppression costs" with K. Gebert, G. Jones, K. Abt, J. Prestemon and A. Gershunov.

Twelve Thirty Club Luncheon Presentation, 22 October 2003, La Jolla Country Club, invited presentation "Climate and Wildfire Management in the Western United States"

Bren School of Environmental Science and Management, 7th Occasional Conference on Environmental Economics, 17-18 October 2003, University of California, Santa Barbara, contributed presentation "Statistical Forecasts of Wildfire Area Burned and Suppression Costs.

Scripps Institution of Oceanography, UCSD Climate Science and Policy Seminar, 20 May 2003, La Jolla, CA, invited seminar "Applied Climatology and Forecasting for Wildland Fire and Fuels Management"

California **Firescope** meeting, 16 April 2003, Sacramento, CA, conducted focus group on fire management decision calendars and the use of climate information.

20th Annual **Pacific Climate Workshop**, 6-9 April 2003, Asilomar, CA, contributed presentation "Statistical Reconstructions of Western U.S. Paleo Fire Regimes" with Thomas Swetnam

Joint **Fire Science Program/National Fire Plan** Wildland Fire Workshop, University of Arizona, Tucson, AZ, March 25-27, 2003, invited participant.

NOAA OGP Regional Integrated Science and Assessment Annual Program Meeting, Scottsdale, AZ, March 11-13, 2003, invited participant.

National Seasonal Assessment Workshop, sponsored by the **National Interagency Coordinating Center** - Predictive Services Group and the Climate Assessment for the Southwest, Mesa, AZ, February 25-28, 2003 invited presentation, "Scripps Statistical Fire Forecasts"

The **Seminar in Environmental and Resource Economics and Policy**, Department of Agricultural and Resource Economics, **University of California, Berkeley**, CA, February 5, 2003, invited presentation, "Statistical Modeling for Wildfire Management"

Climate Prediction Assessments Workshop: Research and Applications on Use and Impacts, Alexandria, VA, October 28-30, 2002, contributed presentation "A New Wildfire Climatology and Seasonal Forecasts for the Western U.S.: Developing and Implementing Tools for Fire and Resource Managers"

Sierra Nevada Science Symposium: Science for Management and Conservation, October 7-10, 2002, Lake Tahoe, California, contributed poster "Climate and Wildfire in California and the western United States"

International Workshop on Regional Integrated Assessment of Climate Impacts, Il Ciocco, Castelvecchio Pascoli, Italy, 16-19 September 2002, presentation "A new wildfire climatology and seasonal forecasts for the western U.S.: Tools for fire and resource managers."

Southeast Fire and Climate Workshop, **University of S. Florida Oceanographic Institute**, June 25-17, St. Petersburg, FL, invited presentation "Economic importance of utilizing climate information for fire management."

American Meteorological Society, San Diego Chapter Meeting, 24 April 2002, La Jolla, CA, invited public seminar "Fire and Climate in the Western United States."

Fire and Climate History in Western North and South America Workshop, **Laboratory for Tree Ring Research**, 23-28 March 2002, Tucson, AZ, invited presentation "Integrating Modern and Reconstructed Fire Histories for the Western United States for a Wildfire Climatology."

Working meeting, **U.S. Forest Service Southern Research Station**, Economics Research Unit, 13-15 March 2002, Research Triangle Park, NC, invited presentation "A Seasonal Wildfire Area Burned Forecast for the Western U.S."; collaboration "A research agenda: the value of wildfire season severity forecasts for fuels management."

Association of American Geographers annual meeting, Society, Fire, Climate and Ecosystems in North America session, 20 March 2002, contributed presentation "Modeling Sierra Nevada Wildfire Season Severity and Suppression Costs under a Climate Change Scenario."

Fire in the West: A Climate/Fuels Assessment, Outlook, and Research Symposium hosted by the Institute for the Study of Planet Earth, the Climate Assessment for the Southwest (CLIMAS), the Laboratory for Tree Ring Research, the Program for Climate Ecosystem and Fire Applications (CEFA) and the National Weather Service Tucson Weather Forecast Office, 5-6 March 2002, Tucson, AZ, invited presentation "A Seasonal Wildfire Area Burned Forecast for the Western U.S."

Predictive Sciences Research Meeting, **National Interagency Fire Center**, 23 January 2002, Boise, ID, invited presentation "Statistical Forecasts of Western Wildfire Season Severity"

American Geophysical Union 2001 Fall Meeting, 10-14 December 2001, San Francisco, CA, contributed poster presentation "Modeling Sierra Nevada Wildfire Season Severity And Suppression Costs Under A Climate Change Scenario"

American Meteorological Society Fourth Symposium on Fire and Forest Meteorology, 13-15 November 2001, Reno, NV, contributed presentation "Statistical Forecasts of Western Wildfire Season Severity"

18th Annual **Pacific Climate Workshop**, 24-27 March 2001, Asilomar, CA, contributed presentation "Statistical Forecasts of Wildfire Season Severity using Cannonical Correlation Analysis"

18th Annual **Pacific Climate Workshop**, 24-27 March 2001, Asilomar, CA, poster presentation "Climate Variability and Large Storm Surge on the Pacific Coast of the United States"

18th Annual Pacific Climate Workshop, 24-27 March 2001, Asilomar, CA, poster presentation "A Western United States Fire Climatology"

Climate Assessment for the Southwest 2001 Fire and Climate Workshops 14-16 February 2001, Tuscon, AZ, contributed presentation, "Climatology of Western Wildfire and Experimental Long-Range Forecasts of Wildfire Season Severity"

81st **American Meteorological Society** Annual Meeting 14-19 January 2001, Albuquerque, NM, poster presentation "Climate Variability and Large Storm Surge on the Pacific Coast of the United States"

81st **American Meteorological Society** Annual Meeting 14-19 January 2001, Albuquerque, NM, poster presentation "A Western United States Fire Climatology"

American Geophysical Union 2000 Fall Meeting, 15-19 December 2000, San Francisco, CA, poster presentation "A Western United States Fire Climatology"

16th Annual **Pacific Climate Workshop**, 24-27 May 1999, Two Harbors, CA, contributed presentation "El Niño and One Hundred Years of Storm Surges in the Northeast Pacific"