

David B. Lobell

Email: dlobell@stanford.edu Phone: 650-721-6207

Professional Appointments:

- 2009 – present Assistant Professor, Environmental Earth System Science
Department, Stanford University
Center Fellow, Program on Food Security and the Environment,
Woods Institute for the Environment and Freeman Spogli
Institute for International Studies, Stanford University
- 2008 – 2009 Senior Research Scholar, Program on Food Security and the
Environment, Stanford University
- 2005 – 2007 Lawrence Fellow, Lawrence Livermore National Laboratory

Education:

- 2005 Ph.D. Stanford University,
Department of Geological and Environmental Sciences
Dissertation: “A remote sensing approach to understand controls
on cropland productivity”
Advisors: Gregory Asner and Pamela Matson
- 2000 Sc.B. Brown University
Department of Applied Mathematics, Magna Cum Laude

Teaching Experience:

Courses Taught at Stanford University.
EESS / EARTHSYST 184/284: “Climate and Agriculture” Spring 2008, 2010
EESS / EARTHSYST 211: “Fundamentals of Modeling” Fall 2009, 2010

Awards and Honors:

Google Science Communication Fellow, 2011
James B. Macelwane Medal, American Geophysical Union, 2010
Fellow, American Geophysical Union, 2010
NASA New Investigator Program Award, 2008-2010
Lawrence Fellowship, Lawrence Livermore National Laboratory, 2005-2008
EPA Science to Achieve Results Graduate Student Fellowship, 2004
NASA Earth System Science Graduate Student Fellowship, 2004
NSF Graduate Research Fellowship, 2000-2004
Carbon, Climate and Society Initiative Fellowship, 2001-2002, NSF IGERT
Best of Session Award, 2001, ERIM Conference on GIS in Agriculture and Forestry
Outstanding Student Paper Award, 1999, American Geophysical Union Fall Meeting.

Professional Activities and Service

Lead Author, Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report,
Chapter 7 of the Working Group II, “Food Production Systems and Food Security”,
2010-2013
Member of National Academy of Sciences Committee on Stabilization Targets for Atmospheric
Greenhouse Gas Concentrations (August 2009-May 2010)
Editorial Board Member, Environmental Research Letters, 2009-present
Editorial Board Member, Global Change Biology, 2011-present
Associate Editor, Journal of Environmental Quality, 2008 – 2010
Co-organized and Led Meeting of 20 International Scientists on “Adapting Agriculture to
Climate Change: The Role of Crop Wild Relatives” in Bellagio, Italy in September, 2010

Organized and Led Meeting of 17 International Scientists on “Climate extremes and crop adaptation” at Stanford in June, 2009
Organized and edited special issue of Journal of Environmental Quality on “Remote Sensing of Soil Degradation”
National Academy of Sciences Panel on Climate, Energy, and Security (May-June 2008)
National Academy of Sciences Workshop on Remote Sensing for Human Welfare (January 2006)
NASA Land Cover Land Use Change Grant Review Panel, September 2005
Reviewer for over 25 scientific journals, including Science, Nature, and PNAS
Numerous invited talks at corporations and business conferences on climate change adaptation.
Numerous public lectures throughout the Bay Area on climate change and food.

Books:

Lobell, D.B. and Burke, M.B. (eds.) 2010. Climate Change and Food Security. Springer.
<http://www.springerlink.com/content/978-90-481-2952-2>

Peer Reviewed Journal Publications (*indicates first author was student or post-doc):

- * Urban, D., M.J. Roberts, W.S. Schlenker, and D.B. Lobell. Projected temperature changes indicate significant increase in interannual variability of U.S. maize yields. *PNAS*, in review.
- * McGrath, J.M., and D.B. Lobell. Reduction of mass flow and altered allocation contribute to nutrient decline of crops grown in elevated [CO₂]. *Global Change Biology*, in review.
- Lobell, D.B., W.S. Schlenker, and J. Costa-Roberts. 2011. “Climate trends and global crop production since 1980” *Science*, doi:10.1126/science.1204531.
- Lobell, D.B., Banziger, M., Magorokosho, C. and Vivek, B., 2011. Nonlinear heat effects on African maize as evidenced by historical yield trials. *Nature Clim. Change*, 1(1): 42-45.
- * Loarie, S.R., Lobell, D.B., Asner, G.P., Mu, Q. and Field, C.B., 2011. Direct impacts on local climate of sugar-cane expansion in Brazil. *Nature Clim. Change*, 1(2): 105-109.
- Lobell, D.B. and C.B. Field. 2011. California perennial crops in a changing climate. *Climatic Change*, in press.
- Lobell, D.B., A. Torney and C.B. Field. 2011. Climate extremes in California agriculture. *Climatic Change*, in press.
- Rowhani, P., Lobell, D. B., Linderman, M. & Ramankutty, N. 2011. Climate variability and crop production in Tanzania. *Agricultural and Forest Meteorology* 10.1016/j.agrformet.2010.12.002.
- *McGrath, J.M., and D.B. Lobell. 2011. An independent method for deriving the carbon fertilization effect using historical yield data from wet and dry years. *Global Change Biology*, doi: 10.1111/j.1365-2486.2011.02406.x.
- * Georgescu, M., Lobell, D.B. and Field, C.B., 2011. Direct climate effects of perennial bioenergy crops in the United States. *Proceedings of the National Academy of Sciences*, 108(11): 4307-4312.
- * Seifert, C., Ortiz-Monasterio, J.I. and Lobell, D.B., 2011. Satellite-Based Detection of Salinity and Sodicity Impacts on Wheat Production in the Mexicali Valley. *Soil Science Society of America Journal*, 75(2): 699.
- * Loarie, S.R., Lobell, D.B., Asner, G.P. and Field, C.B., 2011. Land-Cover and Surface Water Change Drive Large Albedo Increases in South America. *Earth Interactions*, 15(7): 1-16.
- Ebi, K.L., D.B. Lobell, and C.B. Field. 2010. Climate change impacts on food security and nutrition, United Nations’ SCN News, 38: 11-17.
- *Burney, J.A., Davis, S.J. and Lobell, D.B., 2010. Greenhouse gas mitigation by agricultural intensification. *Proceedings of the National Academy of Sciences*, 107(26): 12052.
- Lobell, D.B., Ortiz-Monasterio, J.I. and Lee, A.S., 2010. Satellite evidence for yield growth opportunities in Northwest India. *Field Crops Research*, 118: 13-20.
- Hertel, T., M.B. Burke and D.B. Lobell, 2010. The poverty implications of climate-induced crop yield changes by 2030. *Global Environmental Change*, 20(4): 577-585.
- Lobell, D.B. and M.B. Burke. 2010. On the use of statistical models to predict crop yield responses to climate change. *Agricultural and Forest Meteorology*, 150 (11): 1443-1452.
- Fedoroff, N.V., D.S. Battisti, R.N. Beachy, P.J.M. Cooper, D.A. Fischhoff, C.N. Hodges, V.C. 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. 2010. Radically Rethinking Agriculture for the 21st Century. *Science* 327:833-834.
- Schlenker W and Lobell DB. 2010. Robust negative impacts of climate change on African agriculture. *Environmental Research Letters*: 014010 (8pp)

- Ahrens, T.D., D.B. Lobell, J.I. Ortiz-Monasterio, Y. Li, P.A. Matson. 2010. Narrowing the agronomic yield gap with improved nitrogen use efficiency: a modeling approach. *Ecological Applications*. 20(1): 91-100.
- *Georgescu, M., D. B. Lobell, and C. B. Field. 2009, Potential impact of U.S. biofuels on regional climate, *Geophys. Res. Lett.*, 36, L21806, doi: 10.1029/2009GL040477.
- Lobell, D.B. 2009. Remote Sensing of Soil Degradation: Introduction. *J. Environ. Qual.* 39:1-4.
- Lobell, D.B., S.M. Lesch, D.L. Corwin, M.G. Ulmer, K.A. Anderson, D.J. Potts, J.A. Doolittle, M.R. Matos, and M.J. Baltes. 2009. Regional-scale Assessment of Soil Salinity in the Red River Valley Using Multi-year MODIS EVI and NDVI. *J. Environ. Qual.* 39:35-41.
- Burke, M.B., E. Miguel, S. Satyanath, J.A. Dykema, and D.B. Lobell. 2009. Warming increases the risk of civil war in Africa. *Proceedings of the National Academy of Sciences* 106:20670.
- Burke MB, Lobell DB and Guarino L 2009 Shifts in African crop climates by 2050, and the implications for crop improvement and genetic resources conservation *Global Environmental Change*: 19, 317-325.
- Lobell D.B., K.G. Cassman, and C.B.Field. 2009. Crop Yield Gaps: Their Importance, Magnitudes, and Causes. *Annual Review of Environment and Resources*, 34:4.1-4.26.
- Campbell, J. E., D.B. Lobell, Field, C. B. 2009. Greater transportation energy and GHG offsets from bioelectricity than ethanol. *Science* 10.1126/science.1168885
- Lobell, D.B., G. Bala, A. Mirin, T. Phillips, R. Maxwell, D. Rotman. 2009, Regional differences in the influence of irrigation on climate, *J Climate*. 22:2248-2255.
- Lobell, D.B., and M.B. Burke. 2008. Why are agricultural impacts of climate change so uncertain? The importance of temperature relative to precipitation. *Environmental Research Letters* 3:034007.
- Campbell, J. E., Lobell, D. B., Genova, R. C., Field, C. B. 2008. The global potential of bioenergy on abandoned agriculture lands, *Environmental Science and Technology*. 10.1021/es800052w
- Lobell, D.B., M.B. Burke, C. Tebaldi, M.M. Mastrandrea, W.P. Falcon, and R.L. Naylor. 2008. Prioritizing climate change adaptation needs for food security in 2030. *Science*, 319:607-610. DOI: 10.1126/science.1152339
- Lobell, D.B., and J.I. Ortiz-Monasterio. 2008. Satellite Monitoring of Yield Responses to Irrigation Practices across Thousands of Fields. *Agron. J.* 100:1005-101
- Lobell, D. B., C. J. Bonfils, L. M. Kueppers, and M. A. Snyder. 2008, Irrigation cooling effect on temperature and heat index extremes, *Geophys. Res. Lett.*, 35, L09705, doi:10.1029/2008GL034145.
- Tebaldi, C., and D. B. Lobell 2008, Towards probabilistic projections of climate change impacts on global crop yields, *Geophys. Res. Lett.*, 35, L08705, doi:10.1029/2008GL033423.
- Bonfils, C., P. Duffy, B. Santer, T. Wigley, D. Lobell, T. Phillips, and C. Doutriaux. 2008. Identification of external influences on temperatures in California. *Clim. Change* in press:10.1007/s10584-007-9374-9.
- Field, C.B., J.E. Campbell and D.B. Lobell. 2008. Biomass energy: The scale of the potential resource. *Trends in Ecology & Evolution*, in press. doi:10.1016/j.tree.2007.12.001
- Lobell, D.B., C. Bonfils, and J.M. Faures. 2008. The role of irrigation expansion in past and future temperature trends. *Earth Interactions*, 12:1-11.
- Lobell, D.B., and C. Bonfils. 2008. The Effect of Irrigation on Regional Temperatures: A Spatial and Temporal Analysis of Trends in California, 1934–2002. *J. Clim.* 21:2063-2071.
- Lobell, D.B. and C.B. Field. 2008. Estimation of the CO₂ fertilization effect using growth rate anomalies in CO₂ and crop yields since 1961. *Global Change Biology*, 14, 39-45.
- Duffy, P.B., C. Bonfils, and D.B. Lobell. 2007. Interpreting Recent Temperature Trends in California. *EOS Transactions*, 88 (41): 409-410.
- Field, C.B., D.B. Lobell, H.A. Peters, and N.R. Chiariello. 2007. Feedbacks of Terrestrial Ecosystems to Climate Change. *Annual Review of Environment and Resources*, 32: 7.1-7.29.
- Bonfils, C. and D.B. Lobell. 2007. Evidence for a recent slowdown in irrigation-induced cooling, *Proceedings of the National Academy of Sciences*, doi: 10.1073/pnas.0700144104
- Lobell, D.B. 2007. Changes in diurnal temperature range and national cereal yields. *Agricultural and Forest Meteorology*, 145, 229-238.
- Lobell, D.B. and C.B. Field. 2007. Global scale climate-crop yield relationships and the impacts of recent warming. *Environmental Research Letters*, 2, 004000 (7pp)
- Lobell, D. B., C. Bonfils, and P. B. Duffy. 2007. Climate change uncertainty for daily minimum and maximum temperatures: a model inter-comparison. *Geophysical Research Letters*, 34: L05715, doi:10.1029/2006GL028726.

- Bala, G., K. Caldeira, M. Wickett, T. J. Phillips, D. B. Lobell, C. Delire, and A. Mirin. 2007, Combined climate and carbon-cycle effects of large-scale deforestation, *Proceedings of the National Academy of Sciences*, 0608998104.
- Bonfils, C., P. Duffy, and D. Lobell, 2007, Comments on “Methodology and Results of Calculating Central California Surface Temperature Trends: Evidence of Human-Induced Climate Change?” *J. Climate*, 20, 4486-4489.
- Lobell, D. B., J. I. Ortiz-Monasterio, F. C. Gurrola, and L. Valenzuela. 2007. Identification of Saline Soils with Multiyear Remote Sensing of Crop Yields, *Soil Science Society of America Journal*, 71, 777-783.
- Lobell, D.B., and J.I. Ortiz-Monasterio. 2007. Impacts of day vs. night temperatures on spring wheat yields: a comparison of empirical and CERES model predictions in three locations. *Agronomy Journal*, 99:469-477.
- Ortiz-Monasterio, J.I., and D.B. Lobell. 2007. Remote sensing assessment of regional yield losses due to sub-optimal planting dates and fallow period weed management. *Field Crops Research*. 101:80-87.
- Lobell, D.B. 2007. The cost of uncertainty for nitrogen fertilizer management: A sensitivity analysis. *Field Crops Research*. 100:210-217.
- Lobell, D.B., K.N. Cahill, and C. Field. 2007. Historical effects of temperature and precipitation on California crop yields. *Climatic Change*, 81: 187-203.
- Lobell, D.B., J.I. Ortiz-Monasterio, and W.P. Falcon. 2007. Yield Uncertainty at Field Scales Evaluated with Multi-Year Satellite Data. *Agricultural Systems*, 92:76-90.
- Lobell, D.B., C.B. Field, K.N. Cahill, and C. Bonfils. 2006. Impacts of future climate change on California perennial crop yields: model projections with climate and crop uncertainties. *Agricultural and Forest Meteorology*, 141(2-3):208-218.
- Lobell, D. B., G. Bala, C. Bonfils, and P. B. Duffy. 2006. Potential bias of model projected greenhouse warming in irrigated regions, *Geophys. Res. Lett.*, 33, L13709, doi:10.1029/2006GL026770.
- Lobell, D.B., G. Bala, and P.B. Duffy, 2006. Biogeophysical impacts of cropland management changes on climate. *Geophysical Research Letters*, 33, L06708, doi:10.1029/2005GL025492.
- Lobell, D.B., K.N. Cahill, and C.B. Field, 2006. Weather-based forecasts of California crop yields. *California Agriculture*, 60: 211-215.
- Lobell, D.B., and J.I. Ortiz-Monasterio, 2006. Evaluating Strategies for Improved Water Use in Spring Wheat with CERES. *Agricultural Water Management*, 84: 249-258.
- Lobell, D.B., and J.I. Ortiz-Monasterio. 2006. Regional importance of crop yield constraints: Linking simulation models and geostatistics to interpret spatial patterns. *Ecological Modelling* 196:173-182.
- Lobell, D.B., J.I. Ortiz-Monasterio, G.P. Asner, R. Naylor, W. Falcon, and P. Matson, 2005. Analysis of wheat yield and climatic trends in Mexico. *Field Crops Research*, 94 (2-3): 250-256.
- Lobell, D.B., J.I. Ortiz-Monasterio, G.P. Asner, R. Naylor, and W. Falcon, 2005. Combining field surveys, remote sensing, and regression trees to understand yield variations in an irrigated wheat landscape. *Agronomy Journal*, 97 (1): 241-249.
- Hicke, J.A., and D.B. Lobell, 2004. Spatiotemporal patterns of cropland area and net primary production in the central United States. *Geophysical Research Letters*, 31, L20502, doi:10.1029/2004GL020927.
- Lobell, D.B., and G.P. Asner, 2004. Cropland Distributions from Temporal Unmixing of MODIS Data. *Remote Sensing of Environment*, 93(3): 412-422.
- Hicke, J.A., D.B. Lobell, and G.P. Asner, 2004. Cropland area and net primary production computed from 30 years of USDA agricultural harvest data. *Earth Interactions*, 8(10): 1-20.
- Lobell, D.B., J.I. Ortiz-Monasterio, and G.P. Asner, 2004. Relative Importance of Soil and Climate Variability for Nitrogen Management in Irrigated Wheat. *Field Crops Research*, 87, 155-165.
- Luers, A.L., D.B. Lobell, L.S. Sklar, C.L. Addams, and P.A. Matson, 2003. A method for quantifying vulnerability, applied to the agricultural system of the Yaqui Valley, Mexico. *Global Environmental Change - Human and Policy Dimensions*, 13(4): 255-267.
- Lobell, D.B. and G.P. Asner, 2003. Comparison of Earth Observing-1 ALI and Landsat ETM+ for crop identification and yield prediction in Mexico. *IEEE Transactions On Geoscience and Remote Sensing*, 41(6): 1277-1282.
- Lobell, D.B. and G.P. Asner, 2003. Climate and management contributions to recent trends in U.S. agricultural yields. *Science*, 299: 1032.
- Lobell, D.B., G.P. Asner, J.I. Ortiz-Monasterio, and T.L. Benning, 2003. Remote sensing of regional crop production in the Yaqui Valley, Mexico: estimates and uncertainties. *Agriculture, Ecosystems, and Environment*, 94: 205-220.

- Lobell, D.B., J.I. Ortiz-Monasterio, C.L. Addams, and G.P. Asner, 2002. Soil, climate, and management impacts on regional agricultural productivity from remote sensing. *Agricultural and Forest Meteorology*, 114: 31-43.
- Lobell, D.B., J.A. Hicke, G.P. Asner, C.B. Field, and S.O. Los, 2002, Satellite estimates of productivity and light use efficiency in United States agriculture, 1982-1998. *Global Change Biology*, 8: 722-735.
- Lobell, D.B., and G.P. Asner, 2002. Moisture effects on soil reflectance. *Soil Science Society of America Journal*, 66: 722-727.
- Lobell, D.B., G.P. Asner, R. Treuhaft, and B. Law, 2002, View Angle Effects on Canopy Reflectance and Spectral Mixture Analysis of Temperate Forests Using AVIRIS. *International Journal of Remote Sensing*, 23: 2247-2262.
- Lobell, D.B., G.P. Asner, R. Treuhaft, and B. Law, 2001, Sub-pixel Canopy Cover Estimation of Coniferous Forests in Oregon Using SWIR Imaging Spectrometry. *Journal of Geophysical Research*, 106: 5151-5160.
- Elmore, A.J., J.F. Mustard, S.J. Manning, and D.B. Lobell, 2000, Quantifying Vegetation Change in Semi-Arid Environments: Precision and Accuracy of Spectral Mixture Analysis and the Normalized Difference Vegetation Index. *Remote Sensing of Environment*, 73(1): 87-102.
- Asner, G.P., and D.B. Lobell, 2000, A Biogeophysical Approach for Automated SWIR Unmixing of Soils and Vegetation. *Remote Sensing of Environment*, 74(1): 99-112.

Book Chapters:

- Lobell, D.B. 2010. African Agriculture in 2050: Climate Change Impacts and Adaptation Options. In Rosenzweig and Hillel (ed.) 2010. Handbook on Climate Change and Agroecosystems, ASA.
- Lobell, D.B. and Burke, M.B. 2010. Economic Impacts of Climate Change on Agriculture to 2030. In Reynolds, M. (ed.) 2010. Climate Change and Crop Production. CABI.
- Lobell, D.B. and Burke, M.B. 2010. Chapter 1: Introduction. In Lobell, D.B. and Burke, M.B. (eds.) 2010. Climate Change and Food Security. Springer.
- Burke, M.B. and Lobell, D.B. 2010. Chapter 2: Food Security and Climate: An Overview. In Lobell, D.B. and Burke, M.B. (eds.) 2010. Climate Change and Food Security. Springer.
- Lobell, D.B. 2010. Chapter 5: Crop Responses to Climate: Time Series Models. In Lobell, D.B. and Burke, M.B. (eds.) 2010. Climate Change and Food Security. Springer.
- Burke, M.B. and Lobell, D.B. 2010. Chapter 8: Adaptation – What Do We Know? In Lobell, D.B. and Burke, M.B. (eds.) 2010. Climate Change and Food Security. Springer.
- Lobell, D.B. and Burke, M.B. 2010. Chapter 10: Regional and Global Assessments. In Lobell, D.B. and Burke, M.B. (eds.) 2010. Climate Change and Food Security. Springer.
- Lobell, D.B. and Burke, M.B. 2010. Chapter 11: Where Do We Go From Here? In Lobell, D.B. and Burke, M.B. (eds.) 2010. Climate Change and Food Security. Springer.
- Lobell, D.B. 2010. Impacts of climate change on global crop production and food security. In Climate Change Science and Policy, edited by S. Schneider et al., in press
- Corwin, D. L., S.M. Lesch, and D.B. Lobell. 2009. Chapter 10 - Laboratory and field measurements of salinity. In: Tanji, K.K. (ed.) Agricultural Salinity Assessment and Management, 2nd edition.
- Asner, G.P., J.A. Hicke, and D.B. Lobell. 2003. Per-pixel analysis of forest structure: Vegetation indices, spectral mixture analysis and canopy reflectance modeling. In M. Wulder and S.E. Franklin (eds.), Methods and Applications for Remote Sensing of Forests: Concepts and Case Studies. Kluwer Academic Publishers, New York.

Conference Proceedings:

- Lobell, D.B. and J.I. Ortiz-Monasterio. Mapping Soil Salinity in the Colorado River Delta Region: Scaling From Point to Regional Scales With Multi-Year Satellite Imagery. International Salinity Forum, Riverside, CA, 2005.
- Lobell, D.B. and G.P. Asner. Hyperion studies of crop stress in Mexico. Proceedings of the AVIRIS Workshop, NASA Jet Propulsion Laboratory, Pasadena, CA, 2003.

Selected Invited Talks

- “Food Security and Climate Change: What do we really need to know?” NCCR Climate Summer School, Grindelwald, Switzerland, Sep 2011 (Keynote)
- “Climate trends and crop production” China Agricultural University, Sept 2011
- “How satellites can and can’t be useful for yield gap analysis” Yield Gap Assessment Workshop, China Agricultural University, Sept 2011

"Implications of climate change for agriculture and commodity markets" Climate Change Impacts and Integrated Assessment (CCI/IA) Workshop, Snowmass, CO July 2011

"Climate change: risks and vulnerabilities" National Academy of Sciences Meeting on Exploring Sustainable Solutions for Increasing Global Food Supplies, Washington, DC. May 2011

"Agricultural applications of multi-year remote sensing" 15th Annual NASA LCLUC Science Team Meeting. Maryland, March 2011

"Corn yields and climate: their inseparable futures." National Corn Grower's Association Annual Meeting, August 2010 (Keynote)

"Applying new satellite technologies to improve productivity in wheat." Punjab Agricultural University, March 2010

"The Effects of Global Climate Change on Food Security." AAAS Annual Meeting, February 2010

"Climate Change and Food Security: Meeting the Adaptation Challenge." Purdue University, April 2009

"Adapting Agriculture to Climate Change." Food For Thought Conference, Stanford University, April 2009

"The food security implications of energy development." University of Colorado, April 2009

"Feeding 8 billion in a warming world: what should the priorities be?." University of California, Irvine, March 2009.

"Warming and Crop Production in the US and Beyond." A Second Green Revolution Conference, U Illinois, March 2009.

"Climate impacts on food supply." First Anniversary of the Svalbard Global Seed Vault, Svalbard, Norway, February 2009.

"Climate effects of biofuels: measuring some key parameters." American Geophysical Union Fall Meeting, San Francisco, CA, December 2008.

"California agriculture in a changing climate." American Geophysical Union Fall Meeting, San Francisco, CA, December 2008.

"The effects of irrigation on past and future temperatures in the California Central Valley" Fifth Annual California Climate Change Conference. Sacramento, CA, September 2008.

"Setting Priorities for Climate Change Adaptation in African Agriculture" IGAD Climate Predictions and Applications Centre, Nairobi, Kenya, August 2008

"Carbon and Crops: Does Climate Change Mean Crisis?" Rabobank International Advisory Board Meeting, Mexico City, Mexico, May 2008

"Will climate change lead to widespread hunger and conflict?" Center for Urban Education about Sustainable Agriculture, San Francisco, CA, February 2008.

"Agriculture in a New Era." Stanford University, Stanford, CA, January 2008.

"California Agriculture in a Changing Climate." University of California, Merced, CA, December 2007.

"Warming and the Global Harvest." 50th Anniversary of the Global CO₂ Record Symposium and Celebration, Kona, Hawaii, November 2007.

"Informatics and the Future of Food." University of California, Davis, CA, November 2007.

"Climate Change, Food Security, and Conflict" Third Annual International Day Conference, Stanford, CA, November 2007.

"Adapting Agriculture to Climate Change: California and Beyond." California Institute of Technology, Pasadena, CA, October 2007.

"Climate change impacts and adaptation in agriculture." 2007 BSR Conference on Social Responsibility "Designing a Sustainable Future", San Francisco, CA, October 2007.

"Multi-year crop yield mapping at high spatial resolutions." Association of American Geographers Annual Meeting, San Francisco, CA, April 2007.

"The effects of irrigation on climate: past, present, future." American Geophysical Union Fall Meeting, San Francisco, CA, December 2006.

"Remote Sensing as an Agricultural Research Tool." CIMMYT, Mexico City, 2004.