

## YIQI\* LUO

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### EDUCATION

Postdoctoral fellow, Stanford University. 1992-94.  
Postdoctoral fellow, University of California, Los Angeles. 1991-92.  
Ph.D. in Ecology, University of California, Davis. 1991.  
B.S. Agronomy, Yangzhou University (formerly Jiangsu Agriculture College), China. 1982.

### ACADEMIC APPOINTMENTS

2001-pres. Professor, Department of Botany and Microbiology. University of Oklahoma.  
2012-Pres. Honorary Chair Professor, Center for Earth System Sciences, Tsinghua University, Beijing, China.  
2008-2010. Director, Center of Ecological Forecasting and Data Assimilation, University of Oklahoma.  
2008-2012 Visiting Professor, Department of Ecology and Evolutionary Biology, Fudan Univ. China  
2005-06. Visiting Fellow, Department of Ecology and Evolution, Princeton University.  
2005-08. Visiting professor, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing, China  
2003-09. Interim Director for Global Change Ecology Research Center, University of Oklahoma.  
2003-08. China's Ministry of Education Chang-Jiang Chair Professor, Fudan University, China.  
1999-2001. Associate Professor, Department of Botany and Microbiology. University of Oklahoma.  
1997-98. Associate Research Professor. Desert Research Institute, University of Nevada.  
1994-97. Assistant Research Professor. Desert Research Institute, University of Nevada.  
1997-98. Graduate faculty, Hydrological Sciences program, University of Nevada, Reno.  
1996. Visiting lecturer, Department of Economics, University of Nevada, Reno.  
1994-98. Graduate faculty, Ecology, Evolution and Conservation Biology program, University of Nevada, Reno.  
1981-85. Lecturer and research associate, Dep't of Agronomy, Yangzhou University, China.

### TEACHING AND SUPERVISING EXPERIENCE

1994-pres. Supervised 31 postdocs, 32 graduate students, 22 undergraduates/high school students, and 6 technicians; hosted 26 international and national visiting scholars and professors.  
Presently, 23 people (one assistant research professor, nine post-docs, seven graduate students, three visiting professors, and two undergraduates plus myself) doing research in my lab.

#### Lecturing

2002-pres. BOT 4810/5810. *Ecosystem Ecology*, University of Oklahoma.  
2001-pres. BOT/ZOO/MBIO 6003. *Ecological Modeling*. University of Oklahoma  
1999-pres. BOT 3453. *Principles of Plant Ecology*. University of Oklahoma  
2004. *Research Methods in Global Change and Ecosystem Science in Ecology Lecture Series*, Fudan University, China  
2003, 2008, 2009, 2010, 2011, *Global Change Ecology*, a short summer course at Fudan University, China.  
2000. BOT 4810/5810. *Global Change Biology*. University of Oklahoma  
1998. BIO 325 *Computer acquaintance and applications in biological sciences*. University of

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\*Pronounced as E-chee

Nevada, Reno.

1997. BIO712 *Ecological Modeling*. University of Nevada, Reno.

1996. ECO 350. *Principles of Statistics*. University of Nevada, Reno.

1982-85. *Experimental Design and Biostatistics*. Yangzhou University.

1983. *Regression Analysis*. Yangzhou University.

#### Teaching Assistant

1990. *Plant-Soil-Water Relationships*. University of California, Davis.

1990. *Energy, Society, and Environment*. University of California, Davis.

1980-82. *Experimental Design and Biostatistics*. Yangzhou University.

### **HONORS, AWARDS, AND SCHOLARSHIPS**

2011-pres. Contributing author, Intergovernmental Panel for Climate Change (IPCC) 5<sup>th</sup> Assessment Report (AR5).

2010-pres. 1000 Talent Plan Scholarship, China

2008. The Best Paper Award in Journal of Integrative Plant Biology

2003-08. Changjiang Scholarship, Minister of Education, China

2001. Honored student adviser, University of Oklahoma Student Association

1999. Research Award to Foreign Specialist, National Institution of Agro-Environmental Science, Japan.

1993. Travel award to present a paper in a symposium in honor of the 60th birthday of Dr. Paul J. Crutzen, a Nobel Laureate, held at Boulder, Colorado.

1988. Honorary membership in Phi Sigma Society, Gamma Delta Chapter.

1985-86. Overseas Study Scholarship. Education Commission, China.

1985. Achievements Award in Science and Technology, Jiangsu Province, China.

### **RESEARCH GRANTS**

Funded projects (Totaling USD \$62,327,930, AUD 460,000; Chinese Yuan ¥1,015,000, 143,100€ EURO's)

55. 2013-2018. NSF, \$20,000,000 (Co-I, PI: J.P. Wicksted), Adapting Socio-ecological Systems to Increased Climate Variability

54. 2013-2016. DOE, \$3,634,008 (Co-PI, PI: J. Zhou), From Structure to Functions: Metagenomics-Enabled Predictive Understanding of Soil Microbial Feedbacks to Climate Change

53. 2012-2015. National Institute for Mathematical and Biological Synthesis (NIMBioS) (lead organizer) Nonautonomous system and terrestrial carbon cycle.

52. 2013-2016. Australian Research Council, A\$460,000. (Co-I, PI: Tianhua He, Curtin University) Keeping pace with a changing climate: can Australian plants count on rapid evolution?

51. 2012-2014. DOE, \$850,000 (Co-PI, PI: Rich Norby, ORNL) Model-Data Synthesis of Terrestrial Responses to Elevated CO<sub>2</sub>: Phase 2 of an ongoing collaboration between ecosystem and global modelers and empirical scientists from long-term CO<sub>2</sub> enrichment experiments

50. 2012-2015. DOE Terrestrial Ecosystem Sciences, \$1,050,000 (Principal Investigator). Data Synthesis and Data Assimilation at Global Change Experiments and FLUXNET toward Improving Land Process Models

49. 2012-2017. NSF Macrosystems Biology. \$3,758,556 (Co-PI, PI: Alan Knapp, Colorado State University) Grassland sensitivity to climate change at local to regional scales: assessing the role of ecosystem attributes vs. environmental context (OU portion: \$499,325)

48. 2011-2012. DOE. \$50,000 (Principal Investigator): Workshop: Strategies to Promote Integrated Experiment-Model Approaches to Terrestrial Ecosystem Study. (Managed through ORISE)

47. 2011-2014. DOE. \$1,024,426 (Co-PI, PI: Ted Schuur, University of Florida) Effects of Warming the Deep Soil and Permafrost on Ecosystem Carbon Balance in Alaskan Tundra: A Coupled Measurement and Modeling Approach. (Subcontract to University of Oklahoma: \$225,000)

46. 2010-2012. U.S. Civilian Research & Development Foundation. \$90,000 (Principal investigator)

Nonlinear response of a Ukraine grassland to altered precipitation.

45. 2010-2013. DOE. \$3,000,000 (Co-PI, PI: Jizhong Zhou) From Community Structure to Functions: Metagenomics-Enabled Predictive Understanding of Temperature Sensitivity of Soil Carbon Decomposition to Climate Warming.
44. 2009-2012. The State of Oklahoma, Regents for Higher Education \$300,000 (match) (Co-PI and PI: Paul Risser) “Collaborative Research: EPSCoR RII Track 2 Oklahoma and Kansas: A cyberCommons for Ecological Forecasting”
43. 2009-2012. NSF EPSCoR \$6,000,000 (Co-PI and lead scientist for Oklahoma, PI: Paul Risser) “Collaborative Research: EPSCoR RII Track 2 Oklahoma and Kansas: A cyberCommons for Ecological Forecasting”
42. 2009-2012. NSF \$1,079,454 (Principal Investigator): Development of a Data Assimilation Capability towards Ecological Forecasting in a Data-Rich Era
41. 2009-2010. Oklahoma Bioenergy Center \$250,000 (Co-PI, PI: Liyou Wu) System-level understanding the factors controlling feedstock productivity and sustainability.
40. 2009-2010. NSF \$13,000 and DOE \$15,000 (Principal Investigator): DOE-NSF Workshop: Coordinated Approaches to Address Long-Term Issues in Global Change Experiments
39. 2009-2014. NSF \$500,000 (Principal Investigator): RCN: **F**orecasts **O**f **R**esource and **E**nvironmental **C**hanges: data **A**ssimilation **S**cience and **T**echnology (FORECAST)
38. 2008-2010. NCEAS (National Center for Ecological Analysis and Synthesis) \$86,400 (Co-PI, PI: Richard Norby, Oak Ridge National laboratory), Benchmarking Ecosystem Response Models with Experimental Data from Long-term CO<sub>2</sub> Enrichment Experiments.
37. 2008-2009. University of Oklahoma College Center Investment Fund \$55,000 (PI). Center for Ecological Forecasting and Data Assimilation (CEFDA)
36. 2008-2010. State of Oklahoma \$380,838 (Co-PI, PI: J. Zhou) Linking community structure to functions: Metagenomic analysis of Feedstock-Related Microbial Communities using GeoChip and Pyrosequencing
35. 2008-2013. NSF \$450,000 (Principal Investigator) LTREB: Effects of Warming and Clipping on Coupling of Carbon and Water Cycles in a Tallgrass Prairie (REU supplement, \$7,160, 2011; REU supplement, \$6,240, 2013)
34. 2008-2011. DOE NICCR (National Institute of Climate Change Research) \$388,141 (Principal Investigator) Experimental and modeling study of interactive effects of warming and altered precipitation on function and structure of a tallgrass prairie in the Great Plains.
33. 2007-2011. EPA. \$899,091. (Co-PI, PI: D. Obrist, Desert Research Institute) Effects of Global Change on the Atmospheric Hg Burden and Atmospheric Hg Sequestration through Changes in Ecosystem Carbon Pools.
32. 2007-2008. Bridge fund, Vice President of Research Office, University of Oklahoma, \$22,158.
31. 2007-2008. NSF. \$48,000 (Principal Investigator). Workshop: Data-Model Assimilation in Ecology: Techniques and Applications.
30. 2006-2010. DOE. \$975,000 (Principal Investigator). Data-Model Assimilation at the FACE and AmeriFlux Sites Toward Predictive Understanding of Carbon Sequestration at Ecosystem and Continental Scales
29. 2005-2006. Europe Union Science Foundation, 143,100€ EURO's (Co-I) EPRECOT: Effects of PREcipitation Change on Terrestrial ecosystems – a workshop and networking activity. (PI: Claus Beier, RISOE National Laboratory, Denmark).
28. 2005-2006. DOE. \$260,000 (Principal Investigator). Data-Model Assimilation at the Duke FACE Site Toward Predictive Understanding of Carbon Sequestration at Ecosystem and Regional Scales
27. 2005-2008 NSF. \$260,000 (Principal Investigator) Data-Model Fusion at AmeriFlux Sites: Towards Predictive Understanding of Seasonal and Interannual Variability in Net Ecosystem Exchange.
27. 2004-2008. Vice President of Research Fund, University of Oklahoma, \$66,308.
26. 2003-2008. China's Ministry of Education, Chinese Yuan ¥1,000,000 (≈USD \$121,000) (Principal Investigator). Development of a research program at Fudan University and execution of relevant

research projects.

25. 2003-2005. DOE Office of Fossil Energy, 1,600,000 (Co-I) Carbon Sequestration Regional Partnerships: Southwest Regional Partnership for Carbon Sequestration. (PI: Brian McPherson, New Mexico Institute of Mining and Technology).
24. 2003-2004. National Institute of Global Environmental Change, DOE, \$108,927. (Principal Investigator) Interannual Variability in Net Ecosystem Exchange in Colorado Subalpine Forest: Partitioning into Causes between Climatic Variability and Functional Changes
23. 2001-2005. DOE. \$981,565 (Principal Investigator). Modeling Studies in the Duke Forest Free-Air CO<sub>2</sub> Enrichment (FACE) program.
22. 2001-2006. NSF. \$499,997 (Co-I) Research Coordination Network: Terrestrial Ecosystem Responses to Atmospheric and Climate Change. (PI: L. Rustad. USDA Forest Service)
21. 2000-2003. National Center of Ecological Analysis and Synthesis (NCEAS). \$38,000. (Principal Investigator) Progressive Nitrogen Limitation of Plant and Ecosystem Responses to Elevated CO<sub>2</sub>.
20. 2000-2005. NSF Integrated Research Challenge in Environmental Biology. \$3,000,000. (Co-PI) IRCEB: Interannual climate variability and ecosystem processes – A quantitative assessment combining modeling with field and mesocosm experiments. (PI: J. Arnon III, Desert Research Institute)
19. 2000-2003. National Institute of Global Environmental Change, DOE, \$349,000. (Principal Investigator) Modeling Studies of Forest/Atmosphere Carbon Fluxes in a Colorado Subalpine Ecosystem.
18. 2000-2001. Oklahoma NASA EPSCoR, \$28,527. (Principal Investigator) Human Impacts on Ecosystem Biodiversity and Functions: Development of Partnerships with NASA Goddard Space Flight Center
17. 1998-2001. TECO (Terrestrial Ecosystem and Global Change), a NSF/DOE/ NASA/USDA/NOAA joint program through DOE. \$696,693 (Principal Investigator) Transient responses in ecosystem Free-Air CO<sub>2</sub> Enrichment (FACE) experiments and a deconvolution analysis.
16. 1998-2001. DOE. \$2,850,017 (Co-PI) Forest-Atmosphere Carbon Transfer and Storage (FACTS-I): Continuation. (PI: W. Schlesinger, Duke University)
15. 1999-2000. University of Oklahoma Research Council, \$9,995 (Principal Investigator). Effects of global warming on ecosystem structure and function: Establishing a field experiment to collect preliminary data.
14. 1997-2000. Andrew Mellon Foundation and Desert Research Institute. \$500,000 (Co-PI). A mesocosm study of ecosystem N dynamics. (PI: J. Coleman, Desert Research Institute).
13. 1998-99. US Forest Service. \$1,000,000 (Co-PI) Integrative assessments on the forest watershed in Lake Tahoe Basin.
12. 1998. Nevada Applied Research Initiative. \$30,012 (Principal investigator). Watershed research in the Lake Tahoe Basin.
11. 1997. The Canada Center of Remote Sensing. CND\$5,000. (Principal Investigator) Quantification of carbon sink in Canada land area.
10. 1997-98. DOE. \$100,000 (Co-PI) Continuation of CMEAL (CO<sub>2</sub> Models/Experiments Activity for improved Links) project. (PI: C.B. Field, Carnegie Institution of Washington)
9. 1996-98. Desert Research Institute \$13,551 (Principal Investigator) Global terrestrial carbon sink and its spatial distribution
8. 1996-97. DOE EPSCoR \$400,000 (Co-PI) Responses of desert vegetation to elevated atmospheric carbon dioxide: The NTS desert FACE facility. (PI: J.S. Seemann, the University of Nevada, Reno).
7. 1995-98. DOE. \$2,455,000 (Co-PI) Forest-Atmosphere Carbon Transfer and Storage (FACTS-I): The Duke Forest FACE (Free Air CO<sub>2</sub>-Enrichment) experiment. (PIs: W. Schlesinger, Duke University, and G. Hendrey, Brookhaven National Laboratory).
6. 1995-97. DOE. \$300,000 (Co-PI) CMEAL: CO<sub>2</sub> Models/Experiments Activity for improved Links. (PI: C.B. Field, Carnegie Institution of Washington).
5. 1995-98. NSF \$415,000 (Co-PI) Effects of elevated CO<sub>2</sub> on a Mojave desert ecosystem (PI: S.D.



- Smith, University of Nevada, Las Vegas).
4. 1995-96. USDA and Cornell University. \$10,000 (Co-PI) Workshop: Plant acclimation to elevated CO<sub>2</sub>. (PI: D. Wolfe, Cornell University).
  3. 1994-97. DOE and Electric Power Research Institute (EPRI). \$1,400,000 (Co-PI). Continuation of Experimental Work on Forest Response to CO<sub>2</sub>. (PI: J.T. Ball, Desert Research Institute).
  2. 1994-96. USDA. \$107,000 (Principal Investigator). Test of a model predicting photosynthetic responses to elevated CO<sub>2</sub>.
  1. 1982-85. Agriculture and Forestry Department of Jiangsu Province, China. 15,000 Chinese Yuan. Quantitative genetic studies of corn and wheat.

## PUBLICATIONS

### Books

6. Cheng, Xiaoli, Changming Fang, Yiqi Luo, Bo Li. (eds.) 2013. *Ecology in Yangtze River Estuary*. Springer "Ecology Studies Series", New York.
5. Luo, Y. and X. Zhou. 2006. *Soil Respiration and the Environment*. Academic Press/Elsevier, San Diego. Pp 328. (Translated to Chinese published in 2007 by Higher Education Press, Beijing)
4. Li B, Zhao B, Peng RH, Luo Y. et al. 2005. Translation of book *Principles of Terrestrial Ecosystem Ecology* by Chapin FS, Matson PA, and Mooney HA from English to Chinese. Higher Education Press, Beijing, China.
3. Luo, Y. and H.A. Mooney. (Eds.) 1999. *Carbon Dioxide and Environmental Stress*. Academic Press, San Diego. Pp 418.
2. Mo, H., J. Chang, Y. Luo, J. Kua. 1984. Translation of book *Principles of Crop Improvement* by N.W. Simmonds from English to Chinese. Jiangsu Science & Technology Press, China.
1. Luo, Y. 1983. A Textbook *Agricultural Experimentation: Design and Analysis*. 137p. Jiangsu Agricultural College, China.

### Book chapters/encyclopedia essays

26. Wu XW, CZ Liao B Li, JK Chen, and YQ Luo. 2013. Modeling integration of carbon and nitrogen cycling in the Yangtze River estuarine wetlands. In: XL Cheng, CM Fang, Luo YQ, and B Li (eds) *Ecology of Yangtze River Estuary*. Ecology Studies Series, Springer, New York.
25. Liao CZ, B Li, and YQ Luo. 2013. Ecosystem carbon and nitrogen cycles mediated by dominant plant species in Yangtze River Estuary wetlands. In: XL Cheng, CM Fang, Luo YQ, and B Li (eds) *Ecology of Yangtze River Estuary*. Ecology Studies Series, Springer, New York.
24. Jiang LF, JQ Chen, and YQ Luo. 2013. Leaf and canopy processes of three dominant plant species in the Yangtze River Estuary. In: XL Cheng, CM Fang, Luo YQ, and B Li (eds) *Ecology of Yangtze River Estuary*. Ecology Studies Series, Springer, New York.
23. Grimm NB, FS Chapin III, B Bierwagen, P Gonzalez, PM Groffman, YQ Luo, F Melton, K Nadelhoffer, A Pairis, P Raymond, J Schimel, CE Williamson, MJ Bernstein 2012. Chapter 3. Impacts of Climate Change on Ecosystem Structure and Functioning. In: MD Staudinger, NB Grimm, A Staudt, SL Carter, FS Chapin III, P Kareiva, M Ruckelshaus, BA Stein. *Impacts of Climate Change on Biodiversity, Ecosystems, and Ecosystem Services: Technical Input to the 2013 National Climate Assessment*. Cooperative Report to the 2013 National Climate Assessment. 296 p. Available at: <http://assessment.globalchange.gov>
22. Luo YQ, ES Weng and YH Yang. 2012. Ecosystem ecology. In *Sourcebook in Theoretical Ecology* edited by Alan Hastings and Louis Gross. Pp. 219-229. The University of California Press.
21. Schädel C & YQ Luo. 2012. Biofuels and Ecosystem Carbon Balance under Global Change. "Biofuel / Book 3", ISBN 978-953-307-479-5. InTech - Open Access Publisher
20. Hui DH, HQ Tian, YQ Luo. 2012. Impacts of Climatic Changes on Biogeochemical Cycling in Terrestrial Ecosystems. In WY Chen, JM Seiner, T Suzuki and M Lackner (eds.) *Handbook of Climate Change Mitigation*. SPRINGER. New York.
19. Zhang L., GR Yu, and YQ Luo. 2009. Data-model assimilation for terrestrial ecosystem carbon cycle modeling. Pp. 106-129. In: KR Li, M Huang, B Tao et al. (eds.) *Process-Based Modeling on the*

*Response and Adaptation of Chinese Terrestrial Ecosystems to Global Change*. China Meteorological Press, Beijing (Chinese).

18. Luo, Y.Q. 2009. Residence times. In Steven I. Dutch (ed.) *Encyclopedia of Global Warming*, Salem Press, Pasadena, CA
17. Luo, Y.Q. 2009. Nitrogen fertilization. In Steven I. Dutch (ed.) *Encyclopedia of Global Warming*, Salem Press, Pasadena, CA
16. Luo, Y.Q. 2009. Carbon Dioxide Fertilization. In Steven I. Dutch (ed.) *Encyclopedia of Global Warming*, Salem Press, Pasadena, CA
15. Luo, Y.Q. 2009. Ecosystems. In Steven I. Dutch (ed.) *Encyclopedia of Global Warming*, Salem Press, Pasadena, CA.
14. Yu, GR, MG Cao, JM Chen, YQ Luo, HM Yan, and L. Zhang. 2009. Challenges and missions facing ecology in the 21<sup>st</sup> century. Pp. 1-28. In: Yu GR et al. (eds). *Human Activities and Ecosystem Dynamics*. Science Press, Beijing (Chinese with English abstract).
13. Luo, Y. and L. Zhang, 2009. Assimilation of multi-scale and multi-source ecological data: Techniques and its application to carbon cycle research. Pp. 285-297. In: Yu GR et al. (eds). *Human Activities and Ecosystem Dynamics*. Science Press, Beijing (Chinese with English abstract).
12. Luo, Y. and D. Hui, 2008. Gradual global environmental change in the real world and step manipulative experiments in laboratory and field: the need of inverse analysis. In: Miao SL, Carstenn S, Nungesser M (eds). *Real World Ecology: Large-scale and Long-term Case Studies and Methods*. Springer, New York.
11. Canadell, J.G., D. Pataki, R. Gifford, R. Houghton, Y. Luo, M. Raupach, P. Smith, W. Steffen. 2007. Saturation of the Terrestrial Carbon Sink. Pp. 81-100. In: Canadell JG, Pataki D, Pitelka L (eds) *Terrestrial Ecosystems in a Changing World*. IGBP Series, Springer, Berlin
10. Chen, J., B. Lu, Y. Luo, and Q. Don. 2005. Scientific writing and publication procedure. Pp. 198-222. (In Chinese) In: J. Chen, L. Bo, Z. Ma, and B. Zhao (eds.), *Challenges Facing Ecologists: Questions and Approaches*, Higher Education Press, Beijing, China. 244pp
9. Luo, Y. 2003. Biomes, definitions and determinants. Pp. 147-150. In B.D. Ness (editor). *Magill's Encyclopedia of Science: Plant Life*. Salem Press, Pasadena, California.
8. Luo, Y. 2003. Nutrient cycling. Pp. 732-734. In B.D. Ness (editor). *Magill's Encyclopedia of Science: Plant Life*. Salem Press, Pasadena, California.
7. Miao, S., Y. Luo, Y. Liu, D. Hui. 2002. Structure and Functional Response of Plants to Global Climate Change. Pp. 121-143. In Wu, J. and X. Han (eds). *Lectures in Modern Ecology: From Basic Science to Environmental Issues*. Science Press, Beijing, China. (In Chinese with English abstract).
6. Luo, Y. 1999. Scaling against environmental and biological variability: General Principles and A case study. Pp. 309-331. In: Luo, Y. and H.A. Mooney. (Eds.) *Carbon Dioxide and Environmental Stress*. Academic Press, San Diego.
5. Luo, Y., Canadell, J. and H.A. Mooney. 1999. Interactive effects of carbon dioxide and environmental stress on plants and ecosystems: A synthesis. Pp.393-408. In: Luo, Y. and H.A. Mooney. (Eds.) *Carbon Dioxide and Environmental Stress*. Academic Press, San Diego.
4. Mooney, H.A. and Y. Luo. 1999. Preface. Pp. xiii-xiv. In: Luo, Y. and H.A. Mooney. (Eds.) *Carbon Dioxide and Environmental Stress*. Academic Press, San Diego.
3. Luo, Y. 1997. Quantifying global terrestrial carbon influx and storage as stimulated by an increase in atmospheric CO<sub>2</sub> concentration. pp. 129-140. In C.M. Isaacs and V.L. Tharp (eds.) *Proceedings of the Thirteen Annual Pacific Climate (PACCLIM) Workshop, April 15-18, 1996*. Interagency Ecological Program, Technical Report 53. California Department of Water Resource.
2. Luo, Y. and H.A. Mooney. 1996. Stimulation of global photosynthetic carbon influx by an increase in atmospheric carbon dioxide concentration. pp. 381-397. In G.W. Koch and H.A. Mooney (eds.) *Carbon Dioxide and Terrestrial Ecosystems*. Academic Press, San Diego.
1. Loomis, R.S., Y. Luo, and P. Kooman, 1990. Integration of activities in the higher plant. pp. 105-124. In R. Rabbinge, J. Goudriaan, H. van Keulen, F.W.T. Penning de Vries, and H.H. van Laar (eds.). *Theoretical Production Ecology: reflections and prospects*. Pudoc, Wageningen, The Netherlands.

318p.

Papers in peer-reviewed journals

199. Grimm NB, FS Chapin III, B Bierwagen, P Gonzalez, PM Groffman, YQ Luo, F Melton, K Nadelhoffer, A Pairis, PA Raymond, J Schimel, and CE Williamson. 2013. The Impacts of Climate Change on Ecosystem Structure and Function. *Frontiers in Ecology and the Environment*
198. Li DJ, XH Zhou, LY Wu, JZ Zhou, YQ Luo. 2013. Contrasting responses of heterotrophic and autotrophic respiration to experimental warming in a winter annual-dominated prairie *Global Change Biology*, doi: 10.1111/gcb.12273.
197. Xu X, RA Sherry, SL Niu, DJ Li, YQ Luo. 2013. Net primary productivity and rain use efficiency as affected by warming, altered precipitation, and clipping in a mixed grass prairie *Global Change Biology*, doi: 10.1111/gcb.12248.
196. Hararuk O, D Obrist, Y Luo. 2013. Modeling the sensitivity of soil mercury storage to climate-induced changes in soil carbon pools. *Biogeosciences*, 10: 2393-2407.
195. Luo RS, YY Dong, MY Gan, DJ Li<sup>2</sup>, SL Niu, A Oliver, K Wang, YQ Luo. 2013. Global Analysis of Explanatory Forces of Fire Activity: the Non-continuous Relationships between Vegetation and Fire. *Life Science Journal*
194. Yan LM, YQ Luo, RA Sherry, JE Bell, XH Zhou, JY Xia. 2013. Rain use efficiency as affected by climate warming and biofuel harvest: Results from a 12-year field experiment. *GCB Bioenergy*, in press.
193. Niu SL, RA Sherry, XH Zhou, YQ Luo. 2013. Ecosystem carbon fluxes in response to warming and clipping in a tallgrass prairie. *Ecosystems*, DOI: 10.1007/s10021-013-9661-4.
192. Piao SL, S Sitch, P Ciais, P Friedlingstein, P Peylin, XH Wang, A Ahlström, A Anav, JG Canadell, C Huntingford, M Jung, S Levis, PE Levy, JS Li, X Lin, MR Lomas, M Lu, YQ Luo, YC Ma, RB Myneni, B Poulter, ZZ Sun, T Wang, N Viovy, S Zaehle, N Zeng. 2013. Evaluation of terrestrial carbon cycle models for their response to climate variability and to CO<sub>2</sub> trends. *Global Change Biology*, 19: 2117-2132.
191. Xia JY, YQ Luo, YP Wang, O Hararuk (2013) Traceable components of terrestrial carbon storage capacity in biogeochemical models, *Global Change Biology*, 19: 2104-2116.
190. De Kauwe MG, BE Medlyn, S Zaehle, M Dietze, T Hickler, A Jain, YQ Luo, W Parton, C Prentice, P Thornton, A Walker, SS Wang, YP Wang, D Warlind, ES Weng, K Crous, D Ellsworth, P Hanson, HS Kim, J Warren, R Oren, R Norby. 2013. Canopy water use and water use efficiency at elevated CO<sub>2</sub>: a model-data intercomparison at two contrasting temperate forest FACE sites, *Global Change Biology*, 19: 1759-1779.
189. Wang LX, SL Niu, SP Good, K Soderberg, MF McCabe, RA Sherry, YQ Luo, XH Zhou, JY Xia, KK Caylor. 2013. The effect of warming on grassland evapotranspiration partitioning using laser-based isotope monitoring techniques. *Geochimica et Cosmochimica Acta*, 111: 28-38.
188. Lu M, XH Zhou, YQ Luo, CM Fang, Q Yang, JK Chen, X Yang, and B Li. 2013. Responses of ecosystem carbon cycle to experimental warming: a meta-analysis. *Ecology*, 94: 726-738.
187. Schädel C, Y Luo, RD Evans, S Fei, SM Schaeffer. 2013. Separating soil CO<sub>2</sub> efflux into C pool specific decay rates via inverse analysis of soil incubation data. *Oecologia*, 171: 721-732.
186. Fraser LH, HAL Henry, CN Carlyle, SR White, C Beierkuhnlein, JF Cahill Jr., BB Casper, E Cleland, SL Collins, JS Dukes, AK Knapp, E Lind, RJ Long, YQ Luo, PB Reich, MD Smith, M Sternberg, R Turkington. 2012. Coordinated Distributed Experiments: an emerging tool for testing global hypotheses in ecology and environmental science. *Frontiers in Ecology and the Environment*, doi:10.1890/110279.
185. Xia JY, YQ Luo, YP Wang, ES Weng, O Hararuk. 2012. A semi-analytical solution to accelerate spin-up of a coupled carbon and nitrogen land model to steady state. *Geoscientific Model Development* 5:1259-1271. doi:10.5194/gmd-5-1259-2012.
184. Zhou XH, T Zhou, YQ Luo. 2012. Uncertainties in carbon residence time and NPP-driven carbon uptake in terrestrial ecosystems of the conterminous USA: A Bayesian approach. *Tellus B.*, 64: doi. 10.3402/tellusb.v64i0.17223.

183. McCarthy HR, YQ Luo, SD Wullschlegler (2012) Integrating empirical-modeling approaches to improve understanding of terrestrial ecology processes. *New Phytologist*, 195: 523-525.
182. Weng E., Y Luo, W Wang, H Weng, D Hayes, AD McGuire, A Hastings, and DS Schimel. 2012. Ecosystem carbon storage capacity as affected by disturbance regimes: A general theoretical model, *J. Geophys. Res.*, 117: 3014-3014
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#### **PRESENTATIONS/ABSTRACTS**

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222. Luo Y, Xia J, Wang YP, Hararuk O, Niu S, et al. (2013) A traceability framework to facilitate model evaluation. CESM Land Model and Biogeochemistry Working Group Meetings, 20-22 Feb. 2013. National Center for Atmospheric Research – Boulder, Colorado Mesa Lab, USA. (Oral)
221. Xia, J, Luo Y, Wang YP, Niu S, Hararuk S (2013) Traceable components of modeled carbon storage capacity in terrestrial ecosystem. 4th NACP All-Investigators Meeting, Albuquerque, New Mexico, USA. Feb. 06. (Poster)
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219. Luo Y, Xia J, and Ecolab members. (2013) Evaluating and improving performances of global land-surface models through data synthesis and data assimilation. TES/SBR Joint Investigators Meeting, 14-15 May, 2013. U.S. Department of Energy, Office of Science – Potomac, Maryland, USA. (Poster)

218. Luo, Y. Nonautonomous linear system of the terrestrial carbon cycle. 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.
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214. De Kauwe MG; BE Medlyn; MC Dietze; PJ Hanson; T Hickler; AK Jain; Y Luo; RJ Norby; R Oren; WJ Parton; IC Prentice; PE Thornton; A Walker; Y Wang; S Wang; J Warren; D Warlind; E Weng; S Zaehle Water use and water use efficiency at elevated CO<sub>2</sub>: a model-data intercomparison at two contrasting temperate forest FACE sites. 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.
213. Hararuk O; J Xia; Y Luo Evaluation and Improvement of Two Global Land Models Against Soil Carbon Data Using a Data Assimilation Approach. 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.
212. Wieder W; GB Bonan; O Hararuk; Y Luo Integrating Observations to Inform Soil Biogeochemistry in CLM4. 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.
211. Weng E; Y Luo; W Wang; H Wang; DJ Hayes; AD McGuire; A Hastings; D Schimel Ecosystem carbon storage capacity as affected by disturbance regimes: a general theoretical model. 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.
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208. Luo Y; J Yuan; S Niu Climate and Biological Controls of Carbon Fluxes along latitudinal gradients (Invited). 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.
207. Qi X. and Y Luo Effect of elevated CO<sub>2</sub> on ecosystem nitrogen fluxes and pools: Meta-analysis. 97<sup>th</sup> ESA Annual Meeting, Portland OR, August 5-10, 2012
206. Zhou J, L Wu, K Xue, L Cheng, M Yuan, J Zhang, Y Deng, JD Van Nostrand, Z He, R Penton, J Cole, J Tiedje, R Bracho-Garrillo, EAG Schuur, C Luo, K Konstantinidis, X Xu, D Li, Y Luo, From community structure to function: Metagenomics-enabled predictive understanding of microbial communities to climate warming at the temperate grassland ecosystems in Oklahoma. 97<sup>th</sup> ESA Annual Meeting, Portland OR, August 5-10, 2012
205. Cheng L., Y. Luo, L. Wu, Y Deng, Y. Qin, J. Van Nostrand, Z He, M Beth Leigh, EAG Schuur, J Tiedje, J Zhou. Experimental warming increases old carbon decomposition through shifting functional microbial communities in a tallgrass prairie. 97<sup>th</sup> ESA Annual Meeting, Portland OR, August 5-10, 2012
204. Luo Y, X Xu, RA Sherry, S Niu, D Li, J Xia State transition of US Great Plains prairie under experimental warming. 97<sup>th</sup> ESA Annual Meeting, Portland OR, August 5-10, 2012
203. Xue K, J Xie, Y Deng, L Wu, Z He, JD Van Nostrand, Y Luo, J Zhou, Interactive effects of clipping practice and experimental warming on soil microbial communities involved in nitrogen cycling in a tallgrass prairie. 97<sup>th</sup> ESA Annual Meeting, Portland OR, August 5-10, 2012
202. Xia J, Y Luo, Y Wang Traceable components of modeled carbon storage capacity in terrestrial ecosystem. 97<sup>th</sup> ESA Annual Meeting, Portland OR, August 5-10, 2012
201. Li D, C Schädel, J Zhou, Y Luo, A data-model fusion technique to evaluate the temperature sensitivity of SOC decomposition. 97<sup>th</sup> ESA Annual Meeting, Portland OR, August 5-10, 2012

200. Hararuk O, D Obrist, Y Luo, Modeling the sensitivity of soil mercury storage to climate-induced changes in soil carbon pools. 97<sup>th</sup> ESA Annual Meeting, Portland OR, August 5-10, 2012
199. Luo R, D Li, Y Luo, Global patterns of fire regime analysis based on fire frequency. 97<sup>th</sup> ESA Annual Meeting, Portland OR, August 5-10, 2012
198. Niu S, R Sherry, X Zhou, Y Luo, Ecosystem water fluxes in response to climate warming and biofuel harvest in a tallgrass prairie. 97<sup>th</sup> ESA Annual Meeting, Portland OR, August 5-10, 2012
197. Niu S., D. Li, O. Hararuk, L. Yan, X. Chen, E. Ali, and Y. Luo. Disturbance and Recovery in Terrestrial Ecosystem Carbon Cycling-a Global Synthesis, European Geosciences Union General Assembly, Vienna, Austria, 22 – 27 April 2012
196. Luo Y., X. Xu, R Sherry, S. Niu, D. Li, and J. Xia. Climate Extremes Triggered State Shifting of US Great Plains Prairie under Experimental Warming, European Geosciences Union General Assembly, Vienna, Austria, 22 – 27 April 2012
195. Luo YQ (2011) Ecological Forecasting System. National Academies Keck Future Initiative, Ecosystem Services: Charting a Path to Sustainability, Nov. 10-13, 2011, Irvine, CA.
194. Luo YQ, Y Yang, X Zhou, E Weng, AC Finzi, and R Norby (2011) Key parameters in determining carbon-nitrogen coupling under elevated CO<sub>2</sub> in Duke and Oak Ridge Forests: Results from inverse analysis. 27<sup>th</sup> New Phytologist symposium, Biosphere 2, Oracle, AZ, USA, 25–28 September 2011
193. Zhou XH, YQ Luo, PSJ Verburg, JA Arnone, D. Schimel. 2011 Benchmark analysis of parameterization under climate warming for terrestrial carbon cycle model. 96<sup>th</sup> ESA Annual Meeting, Austin, TX, August 7-15, 2011.
192. Zhou LH, GJ Yang, YQ Luo, Landscape change and human activity analysis on desertification process in northern China. 96<sup>th</sup> ESA Annual Meeting, Austin, TX, August 7-15, 2011.
191. Luo YQ, Predicting future states of ecosystems in the southern Great Plains. 96<sup>th</sup> ESA Annual Meeting, Austin, TX, August 7-15, 2011.
190. Qi X, YQ Luo, XH Zhou, Response of ecosystem nitrogen cycle to elevated CO<sub>2</sub>: A meta-analysis. 96<sup>th</sup> ESA Annual Meeting, Austin, TX, August 7-15, 2011.
189. Niu SL, R Sherry, XH Zhou, YQ Luo, Composition of C<sub>3</sub> and C<sub>4</sub> species regulates ecosystem response to climate warming. 96<sup>th</sup> ESA Annual Meeting, Austin, TX, August 7-15, 2011.
188. Xiao JF, KJ Davis, JQ Chen, M Reichstein, DD Baldocchi, C Beer, L Chasmer, JM Chen, AR Desai, K Ichii, A Ito, R John, M Jung, T Kato, W Knorr, BE Law, S Liu, YQ Luo, M Mirco, Q Mu, K Naithani, D Papale, SW Running, Y Ryu, KM Schaefer, CR Schwalm, G Sun, H Tian, E Tomelleri, CA Williams, B Wylie, W Yuan, L Zhang (2011) Advances in Upscaling of Carbon and Water Fluxes from Towers to Regional, Continental and Global Scales. 3<sup>rd</sup> North American Carbon Program (NACP) all investigators meeting, Jan. 31-Feb. 4, 2011, New Orleans, LA.
187. SL Niu, YQ Luo, S Fei, Z Zhang, D Schimel (2011) Thermal optimality of Net Ecosystem Carbon Exchange and Its Temperature Acclimation. 3<sup>rd</sup> North American Carbon Program (NACP) all investigators meeting, Jan. 31-Feb. 4, 2011, New Orleans, LA.
186. Schwalm CR, CA Williams, K Schaefer, R Anderson, M Arain, I Baker, A Barr, T Black, G Chen, JM Chen, P Ciais, KJ Davis, A Desai, M Dietze, D Dragoni, ML Fischer, LB Flanagan, R Grant, L Gu, DY Hollinger, RC Izaurralde, C Kucharik, P Lafleur, BE Law, L Li, Z Li, S Liu, EY Lokupitiya, YQ Luo, S Ma, HA Margolis, R Matamala, HJ McCaughey, RK Monson, WC Oechel, C Peng, B Poulter, DT Price, DM Ricciuto, WJ Riley, AK Sahoo, M Sprintsin, J Sun, H Tian, C Tonitto, H Verbeeck, SB Verma (2011) Evaluating Terrestrial Biosphere Models: Comparing Simulated and Observed Net Ecosystem Exchange. 3<sup>rd</sup> North American Carbon Program (NACP) all investigators meeting, Jan. 31-Feb. 4, 2011, New Orleans, LA.
185. XH Zhou, YQ Luo, PS Verburg, JA Arnone, DS Schimel (2011) Benchmark analysis of parameterization under climate warming for terrestrial carbon cycle model. 3<sup>rd</sup> North American Carbon Program (NACP) all investigators meeting, Jan. 31-Feb. 4, 2011, New Orleans, LA.
184. Luo YQ and ES Weng (2011) *A unified concept for carbon research: Dynamic disequilibrium of the terrestrial carbon cycle under global change*. 3<sup>rd</sup> North American Carbon Program (NACP) all investigators meeting, Jan. 31-Feb. 4, 2011, New Orleans, LA.



183. Luo Y. (2010) *Does nitrogen limit carbon sequestration in terrestrial ecosystems?* The 5<sup>th</sup> international nitrogen conference. New Delhi, India. 4-9 Dec.
182. Yang, Y, Zhou, X, Weng, E, Luo, Y (2010) Inversion of coupled carbon-nitrogen model parameters against multiple datasets using Markov chain Monte Carlo methodology. 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
180. Weng, E, Luo, Y (2010) Relative Information Contributions of Model vs. Data to Constraints of Short- and Long-Term Forecasts of Forest Carbon Dynamics. 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
180. Xiu, X, Luo, Y, Sherry, R A, Yang, Y, Zhou, X, Niu, S (2010) Increased carbon recalcitrance with depletion of labile organic carbon under a long-term experimental warming in a tallgrass prairie. 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
179. Luo, Y, Zhou, X, Verburg, P, Arnone, J (2010) Benchmark analysis of parameterization for terrestrial carbon cycle model (Invited) . 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
178. Schädel, C, Fei, S, Luo, Y (2010) Parameter constraints to reveal temperature sensitivity of soil C decomposition by incubation data. 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
177. Luo, Y, Niu, S, Fei, S, Yuan, W, Zhang, Z, Schimel, D, FLUXNET PIs. (2010) Thermal Acclimation and Adaptation of Net Ecosystem Carbon Exchange (Invited) . 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
176. Reichstein, M, Ciais, P, Seneviratne, S I, Carvalhais, N, Dalmonech, D, Jung, M, Luo, Y, Mahecha, M D, Moffat, A M, Tomelleri, E, Zaehle, S (2010) How to 'Elk-test' biogeochemical models in a data rich world? (Invited). 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
175. Weng ES, N Petrov, YQ Luo, WL Wang, and H Wang, Carbon storage capacity under varying disturbance regimes. 95<sup>th</sup> ESA Annual Meeting, Pittsburgh, PA, August 1-6, 2010
174. Luo Y, K Ogle, C Tucker, S Fei, SL LaDeau, JS Clark, and DS Schimel, Data assimilation and ecological forecasting in a data-rich era. 95<sup>th</sup> ESA Annual Meeting, Pittsburgh, PA, August 1-6, 2010.
173. Niu S, X Yan, and Y Luo, Ecosystem carbon exchange in response to climate warming: short vs long term. 95<sup>th</sup> ESA Annual Meeting, Pittsburgh, PA, August 1-6, 2010.
172. Zhou X and Y Luo, Effects of climate warming and biofuel feedstock harvest on belowground process in a tallgrass prairie. 95<sup>th</sup> ESA Annual Meeting, Pittsburgh, PA, August 1-6, 2010.
171. Leuzinger S, Y Luo, C Beier, and C Koerner, Global change experiments overestimate impacts on terrestrial ecosystems. 95<sup>th</sup> ESA Annual Meeting, Pittsburgh, PA, August 1-6, 2010.
170. Dietze M, Y Luo, R Oren, IC Prentice, PJ Hanson, and RJ Norby, How well are we modeling forest responses to elevated CO<sub>2</sub>? Results of the FACE/model inter-comparison project. 95<sup>th</sup> ESA Annual Meeting, Pittsburgh, PA, August 1-6, 2010.
169. Yang Y, X Zhou, and Y Luo, Inversion of coupled carbon-nitrogen model parameters against multiple datasets using Markov chain Monte Carlo methodology. 95<sup>th</sup> ESA Annual Meeting, Pittsburgh, PA, August 1-6, 2010.
168. Heisler-White JL, J Morgan, WJ Parton, JM Blair, NR Chiariello, JS Dukes, PA Fay, CB Field, SS Hoeppner, M Hovenden, AK Knapp, Y Luo, S Niu, E Pendall, and V Suseel, Modeled effect of warming on ecosystem carbon and water dynamics within grassland/old-field ecosystems along a moisture gradient. 95<sup>th</sup> ESA Annual Meeting, Pittsburgh, PA, August 1-6, 2010.
167. Sherry RA, LL Wallace, and Y Luo, Plant community structure and stability over ten years of warming and harvesting. 95<sup>th</sup> ESA Annual Meeting, Pittsburgh, PA, August 1-6, 2010.
166. Fei S, Z Zhang, and Y Luo, Real time forecast of forest carbon dynamics using ensemble Kalman filtering method. 95<sup>th</sup> ESA Annual Meeting, Pittsburgh, PA, August 1-6, 2010.
165. Arnone J, A Lucchesi, R Jasoni, J Larsen, EA Leger, RA Sherry, LL Wallace, Y Luo, and PSJ Verburg, The role of grassland plant species composition in defining synchronous and lagged responses of NPP and net ecosystem CO<sub>2</sub> balance to interannual temperature variability. 95<sup>th</sup> ESA Annual Meeting, Pittsburgh, PA, August 1-6, 2010.
164. Yang, Y and Luo, Y. Long-term nitrogen regulation of forest carbon sequestration. American

- Geophysical Union Fall Meeting, 14–18 December 2009, San Francisco, California, USA.
163. Weng, E and : Luo, Y. Comparing intra- and inter- biogeochemical model uncertainties based on the results of the North American Carbon Program Site-level Interim Synthesis. American Geophysical Union Fall Meeting, 14–18 December 2009, San Francisco, California, USA.
  162. Luo, Y. Data Assimilation at FLUXNET to Improve Models towards Ecological Forecasting (*Invited*) . American Geophysical Union Fall Meeting, 14–18 December 2009, San Francisco, California, USA.
  161. Niu, S and Luo, Y. Nitrogen regulation of climate-carbon cycle feedback: evidence from a long-term global change experiment. American Geophysical Union Fall Meeting, 14–18 December 2009, San Francisco, California, USA.
  160. Arnone, J, Jasoni, R L, Larsen, J D, Coulombe, W, Darrouzet-Nardi, A, Luo, Y, and Verburg, P. Ecosystem respiratory responses to interannual and seasonal temperature variability in intact tallgrass prairie ecosystems in the EcoCELLs. American Geophysical Union Fall Meeting, 14–18 December 2009, San Francisco, California, USA.
  159. Fei, S, Weng, E, Zhou, X, and Luo, Y. Real time forest carbon flux dynamics forecasting using Ensemble Kalman Filter. American Geophysical Union Fall Meeting, 14–18 December 2009, San Francisco, California, USA.
  159. Luo Y. Grassland biodiversity and ecosystem functions under climate change. Second DIVERSITAS Open Science Conference. 13 – 16 October 2009, Cape Town, South Africa
  158. Yang Y and Y Luo. Carbon and nitrogen accumulation during secondary succession. Ecological Society of America Annual Meeting, Albuquerque, New Mexico, August 2-7, 2009
  157. Zhou X, Y Luo, PSJ Verburg, J Arnone, and DS Schimel. Concurrent and lagged impacts of an anomalously warm year on components of soil respiration: A deconvolution analysis. Ecological Society of America Annual Meeting, Albuquerque, New Mexico, August 2-7, 2009
  156. Luo Y, M Lu, X Zhou, B Li, C Fang, and J Chen. Minor stimulation of soil carbon storage by nitrogen addition. Ecological Society of America Annual Meeting, Albuquerque, New Mexico, August 2-7, 2009
  155. Sheik C, M Elshahed, Y Luo, G Wiley, S Macmil, C Qu, P Wang, BA Roe, and L Krumholz. Pyrosequencing reveals the effects of simulated warming on microbial abundances and diversities in a tall grass prairie. Ecological Society of America Annual Meeting, Albuquerque, New Mexico, August 2-7, 2009
  154. Luo YQ. Terrestrial Carbon-Cycle Feedback to Climate Warming: Experimental Evidence. Climate Change: Global Risks, Challenges, and Decisions, March 10-12 Copenhagen.
  155. Daniel M Ricciuto, Kenneth J. Davis, Ankur R Desai, Andrew M Fox, Michael C Dietze, Shuguang Liu, Yiqi Q Luo, Andrew D Richardson, Kevin Schaefer, Mathew Williams. Improving carbon flux predictions in North America from the bottom up: The current state of eddy covariance based model-data fusion North America Carbon Program 2<sup>nd</sup> open science conference, Feb 16-20, 2009. San Diego, CA.
  154. Xuhui Zhou, Tao Zhou, Yiqi Luo. Uncertainties in carbon residence time and sequestration in terrestrial ecosystems of the conterminous USA: A Bayesian approach North America Carbon Program 2<sup>nd</sup> open science conference, Feb 16-20, 2009. San Diego, CA.
  153. Jingfeng Xiao, Kenneth J. Davis, Xuhui Zhou, Tao Zhou, Yiqi Luo, Christian Beer, Ben Bond-Lamberty, Ankur Desai, Martin Jung, Beverly E. Law, Leo Liu, Wilfred M. Post, Markus Reichstein, Daniel Ricciuto, Enrico Tomelleri, David Turner, Steven C. Wofsy, Bruce K. Wylie, Xiangming Xiao, Feihua Yang, Li Zhang, Maosheng Zhao. Regional to Continental Upscaling of AmeriFlux Data for Carbon Cycle Studies: Progress, Challenges, and New Directions. North America Carbon Program 2<sup>nd</sup> open science conference, Feb 16-20, 2009. San Diego, CA.
  152. Deb Agarwal, Brian Amiro, Ryan Anderson, Altaf M. Arain, Ian Baker, Dennis Baldocchi, Alan Barr, Andy Black, Tom Boden, Paul Bolstad, Sean Burns, Steve Campbell, Guangsheng Chen, Jing Chen, Philippe Ciais, Bob Cook, David Cook, Peter Curtis, Kenneth J. Davis, Steve Delgrosso, Michael Dietze, Dimitre Dimitrov, Danilo Dragoni, Howard Epstein, Matthias Falk, Marc Fischer,

- Larry Flanagan, Allen Goldstein, Michael Goulden, Robert F. Grant, Lianhong Gu, Niall Hanan, Iain Hawthorne, Tim Hilton, Forrest Hoffman, David Hollinger, Tara Hudiburg, Misa Ishizawa, Cesar Izaurralde, Jeff Nichols, Robin Kelly, Tony King, Christopher Kucharik, Peter Lafleur, Beverly Law, Zhengpeng Li, Leo Liu, Mingliang Liu, Erandi Lokupitiya, Yiqi Luo, Hank Margolis, Roser Matamala, Harry McCaughey, Tilden Meyers, Russell Monson, Bill Munger, Walt Oechel, Ram Oren, William Parton, Elizabeth Pattey, Changhui Peng, Philippe Peylin, ShiLong Piao, Mac Post, Ben Poulter, David Price, Brett Raczka, Dan Ricciuto, Andrew Richardson, William J. Riley, Michael Ryan, Alok Sahoo, Nick Saliendra, Crystal Schaaf, Kevin Schaefer, Andrew Schuh, Michael Sprintsin, Paul Stoy, Peter Thornton, Hanqin Tian, Christina Tonitto, Margaret Torn, Catharine van Ingen, Rodrigo Vargas, Hans Verbeeck, Shashi Verma, Nicolas Viovy, Weile Wang, Ensheng Weng, Christopher Williams, Xiaofeng Xu, Bai Yang, Wenping Yuan, Tianshan Zha, Xuhui Zhou. Site-level synthesis of modeled and measured carbon, water, and energy fluxes across North America: Evaluation of model and measurement uncertainty. North America Carbon Program 2<sup>nd</sup> open science conference, Feb 16-20, 2009. San Diego, CA.
151. Luo YQ, NM Urban, KJ Davis, K Keller, P Thornton, M Post, ES Weng. Assimilation of Multiple, Heterogeneous Data Sets to Enhance Predictability of Future Carbon Sink dynamics in the North America Terrestrial Ecosystems. North America Carbon Program 2<sup>nd</sup> open science conference, Feb 16-20, 2009. San Diego, CA.
  150. Zhou XH, T Zhou, YQ Luo. Uncertainty analysis of carbon turnover time and sequestration potential in terrestrial ecosystems of the conterminous USA. Ecological Society of America Annual Meeting, August 3-8, 2008, Milwaukee, WI.
  149. Fei SF, RA Sherry, XH Zhou, LL Wallace, J Arnone, DS Schimel, PSJ Verburg, and YQ Luo. Changes of root biomass in response to a one-year temperature and precipitation alteration experiment in a tallgrass prairie. Ecological Society of America Annual Meeting, August 3-8, 2008, Milwaukee, WI.
  148. Bell JE and YQ Luo. A meta-analysis and modeling approach to understanding climate warming impacts on ecosystem rain use efficiency. Ecological Society of America Annual Meeting, August 3-8, 2008, Milwaukee, WI.
  147. Hui DF, PSJ Verburg, J Arnone, and YQ Luo. Dynamics and partitioning of whole ecosystem respiration in a controlled grassland ecosystem. Ecological Society of America Annual Meeting, August 3-8, 2008, Milwaukee, WI.
  146. Yuan WP, and YQ Luo. Environmental and biological regulations of interannual variability of net ecosystem exchange across regional scales. Ecological Society of America Annual Meeting, August 3-8, 2008, Milwaukee, WI.
  145. Luo YQ, D Gerten. Modeled interactive effects of precipitation, temperature, and CO<sub>2</sub> on ecosystem carbon and water dynamics in different climatic zones. Ecological Society of America Annual Meeting, August 3-8, 2008, Milwaukee, WI.
  144. Lu M, YQ Luo and B Li. Nitrogen fertilization differentiates carbon and nitrogen sequestrations in terrestrial ecosystem: A meta-analysis. Ecological Society of America Annual Meeting, August 3-8, 2008, Milwaukee, WI.
  143. Gao C, H Wang, S. Lakshmivarahan, ES Weng, YF Zhang, and YQ Luo. Parameter estimation and uncertainty analysis of forest carbon dynamics: Ensemble Kalman filter method. Ecological Society of America Annual Meeting, August 3-8, 2008, Milwaukee, WI.
  142. Weng ES, C Gao, and YQ Luo. Uncertainty analysis with data-model assimilation at Duke FACE. Ecological Society of America Annual Meeting, August 3-8, 2008, Milwaukee, WI.
  141. Luo YQ. Biofuel feedstock production and carbon balance under Climate Changes. Oklahoma Bioenergy Symposium. University of Oklahoma, April 23, 2008.
  140. Obrist D, Fain X, Johnson D, Lindberg S, Luo Y (2008) Mercury sequestration in vegetation and soils and consequences for atmospheric mercury levels. USDA Air Pollution Workshop and Symposium, Raleigh, NC, April 2008.
  139. Obrist D, Luo Y, Johnson D, Lindberg S. Mercury sequestration in vegetation and soils in US forests

- and consequences for atmospheric mercury levels (2008). Swiss Soil Monitoring Network (NABO), Federal Office for the Environment, Department of the Environment, Transport, Energy, and Communications, Switzerland.
138. Obrist D, Luo Y, Johnson DW, Lindberg SE (2007). Effects of global change on the atmospheric mercury burden and mercury sequestration through changes in ecosystem carbon pools. Consequences of Global Change for Air Quality Progress Review; US EPA National Center for Environmental Research, February 2007, Raleigh, NC.
  137. Zhou, XH, ES Wen, Y. Luo Patterns of nonlinearity in ecosystem responses to multifactor global change. Annual AGU meeting, San Francisco, CA, Dec. 9-14, 2007.
  136. Luo Y. R Sherry, X. Zhou. Ecosystem-scale sensitivity of carbon cycling to climate warming. Annual AGU meeting, San Francisco, CA, Dec. 9-14, 2007.
  135. Yuan WP, Y. Luo and AmeriFlux and EuroFlux PIs. Latitudinal Patterns of Interannual Variability in Net Ecosystem Exchange. Annual AGU meeting, San Francisco, CA, Dec. 9-14, 2007.
  134. Luo YQ Uncertainty analysis with data assimilation. Annual AmeriFlux meeting, Boulder CO. Oct.17-19, 2007.
  133. Yuan WP, Y. Luo and AmeriFlux and EuroFlux PIs. Latitudinal Patterns of Interannual Variability in Net Ecosystem Exchange. Annual AmeriFlux meeting, Boulder CO. Oct.17-19, 2007.
  132. Luo, Y. Model assimilation of data from manipulative experiments. In NSF workshop: Data-model assimilation in ecology: techniques and applications, Norman, Oklahoma, 22-24 October, 2007
  131. Gao, G. H Wang, S Lakshmivarahan, ES Weng, YF Zhang, and YQ Luo. Parameter estimation of forest carbon dynamics using Kalman Filter methods –Preliminary results. In NSF workshop: Data-model assimilation in ecology: techniques and applications, Norman, Oklahoma, 22-24 October, 2007.
  130. Weng ES, C. Gao, YQ Luo. Uncertainty Analysis with Data-Model Assimilation at Duke FACE. In NSF workshop: Data-model assimilation in ecology: techniques and applications, Norman, Oklahoma, 22-24 October, 2007
  129. Zhou XH, T. Zhou, YQ Luo. Uncertainty analysis of carbon turnover time and sequestration potential in terrestrial ecosystems of the Conterminous USA. In NSF workshop: Data-model assimilation in ecology: techniques and applications, Norman, Oklahoma, 22-24 October, 2007
  128. Luo Y. Carbon uptake drives nitrogen cycling in terrestrial ecosystem. The 4<sup>th</sup> international conference on Nitrogen, Salvador, Brazil. Oct 1-5, 2007.
  127. Liao CZ, Y. Luo, X. Zhou, X. Wu, J. Chen, and B. Li. Altered ecosystem carbon and nitrogen cycles by plant invasion: A meta-analysis. Ecological Society of America Annual Meeting, August 5-10, 2007, San Jose, CA.
  126. Sherry RA, LL Wallace, Y Luo, J Arnone, and DS Schimel Changes in species cover due to interannual variation in temperature and precipitation in a tallgrass prairie experiment. Ecological Society of America Annual Meeting, August 5-10, 2007, San Jose, CA.
  125. Wu X, L White, Y Ma, X Zhou, and Y Luo Conditional inversion to estimate parameters from eddy flux observations. Ecological Society of America Annual Meeting, August 5-10, 2007, San Jose, CA.
  124. Bell JE, Y Luo, and E Weng Impact of climate change on prairie soil water dynamics. Ecological Society of America Annual Meeting, August 5-10, 2007, San Jose, CA.
  123. Zhou X, E Weng, and Y Luo Nonlinear response patterns of ecosystem carbon and water processes to gradual changes in temperature, atmospheric CO<sub>2</sub>, and precipitation: Modeling analysis. Ecological Society of America Annual Meeting, August 5-10, 2007, San Jose, CA.
  122. Weng E, X Zhou, R Sherry, and Y Luo. Soil water holding capacity regulates ecosystem responses to multifactor global change: A modeling analysis. Ecological Society of America Annual Meeting, August 5-10, 2007, San Jose, CA.
  121. Luo Y. Terrestrial carbon-cycle feedback to climate warming: Synthesis of modeling results and experimental evidence. Ecological Society of America Annual Meeting, August 5-10, 2007, San Jose, CA.



120. Wallace, LL, Y. Luo, P. Gibson, and M. Palmer, Ecological Effects of Large Scale Biofuel Production. The First Annual Oklahoma Biofuel Research Symposium. Ponca City, Oklahoma, March 10, 2007.
119. Wu X., X. Zhou, L. White, Y. Luo. 2006. Conditional inversion for estimation of parameters from net ecosystem exchange. AmeriFlux annual meeting, Boulder, CO. Oct. 16-18.
118. Zhou X., S. Wan, Y. Luo, 2006. Interannual variability of soil CO<sub>2</sub> efflux and its components under experimental warming and clipping in a tallgrass prairie ecosystem. AmeriFlux annual meeting, Boulder, CO. Oct. 16-18.
117. Luo. Y. 2006. Terrestrial carbon cycle feedback to climate warming. Ecomunch, Graduate program of Ecology, Evolution, and Conservation Biology, University of Oklahoma (Oct. 3)
116. Liao C, B. Li, Y. Luo. 2006. Changes in carbon and nitrogen pools of the Yangtze estuarine ecosystems invaded by *Spartina alterniflora*. Ecological Society of America annual meeting at Memphis, TN August 4-11
115. Weng E, Y. Luo, L. Rustad. 2006. Ecosystem responses to multiple global change factors: a modeling approach. Ecological Society of America annual meeting at Memphis, TN August 4-11
114. Luo Y, R. Sherry, X. Zhou. 2006. Experimental warming stimulated productivity, nitrogen cycling, and C<sub>4</sub> plant dominance in a tallgrass prairie. Ecological Society of America annual meeting at Memphis, TN August 4-11
113. Zhou X., S. Wan, Y. Luo, 2006. Partitioning sources of soil CO<sub>2</sub> efflux and their interannual variability under experimental warming in a tallgrass prairie ecosystem. Ecological Society of America annual meeting at Memphis, TN August 4-11
112. Wu X, C. Liao, B. Li, J. Chen, Y. Luo. 2006. Ecosystem carbon and nitrogen dynamics as affected by biological invasion: a modeling assessment. Ecological Society of America annual meeting at Memphis, TN August 4-11
111. Yiqi Luo. Initial Values, Residence Times, and Carbon Sequestration. America Geophysical Union Western Pacific Conference, Beijing, China (July 24)
110. Tao Zhou, Tao Xu, and Yiqi Luo. 2005 Spatial Patterns of Carbon Residence Time and Sequestration Capacity in Terrestrial Ecosystems of the Conterminous USA. American Geophysical Union, San Francisco, Dec. 5-9, 2005
109. D. Hui, Y. Luo and R. B. Jackson. 2005. Uncertainty in power law analysis: Influences of sample size, measurement error, and analysis method. American Geophysical Union, San Francisco, Dec. 5-9, 2005
108. Yiqi Luo. 2005. Land Carbon Sink and Nitrogen Regulation under Elevated CO<sub>2</sub>: Central Tendency. The 7<sup>th</sup> International Carbon Dioxide Conference, Broomfield, CO, September 25-30.
107. Tao Zhou, Tao Xu, and Yiqi Luo. 2005 Spatial Patterns of Carbon Residence Time and Sequestration Capacity in Terrestrial Ecosystems of the Conterminous USA. The 7<sup>th</sup> International Carbon Dioxide Conference, Broomfield, CO, September 25-30.
106. Tao Xu, Luther White, Dafeng Hui, Yiqi Luo. 2005. Stochastic Inversion of a Terrestrial Ecosystem Model: Analysis of Uncertainty in Parameter Estimation and Model Prediction. The 7<sup>th</sup> International Carbon Dioxide Conference, Broomfield, CO, September 25-30.
105. Rebecca Sherry, Linda Wallace, Yiqi Luo, Jay Arnone, Paul Verburg, Dale Johnson, and D. Schimel. 2005 The Effects of Interannual Variation in Temperature and Precipitation on Grassland Production and Community Structure: 3 Years Data. Ecological Society of America annual meeting at Montreal, Canada, August 7-12, 2005
104. Yiqi Luo, Dafeng Hui, and Deqiang Zhang. 2005. Net Accumulations of C and N in Ecosystems at Elevated CO<sub>2</sub>. Ecological Society of America annual meeting at Montreal, Canada, August 7-12, 2005.
103. Xu, T., Y. Luo, L. White. Bayesian Stochastic Approach to Inversion of a Terrestrial Carbon Sequestration Model: Analysis of Uncertainties and Information Contents. In TERACC workshop, Ft Myers, FL, Jan. 9-12, 2005.
102. Hui, D., Yiqi Luo, Shiqiang Wan, Tao Xu, Scott R. Saleska, Xuhui Zhou, Rebecca A. Sherry, Bo Su,

- and Linda L. Wallace. Evidence of decreased soil moisture sensitivity of soil respiration under warming in a tallgrass prairie. In AGU meeting held in San Francisco, CA, 12-17 December 2004. Abstracts of Eos, Transactions, American Geophysical Union, Vol. 85, No. 47, 2004.
101. An, Y., Y. Luo, S. Wan, and X. Zhou. Warming effects on green leaf and dead leaf nutrients in a tallgrass prairie. Ecological Society of America annual meeting at Portland, Oregon, August 1-6, 2004.
  100. Wang, Q., B. Li, Y. Luo, J. Chen, Competitive interactions between co-occurring native and alien invasive plants under varying growing conditions. Ecological Society of America annual meeting at Portland, Oregon, August 1-6, 2004.
  99. Luo, Y., L. White, D. Hui, A two-pool model estimates faster fine root turnover than the exponential equation from carbon isotope data. Ecological Society of America annual meeting at Portland, Oregon, August 1-6, 2004.
  98. Zhou, T., Y. Luo, An inversion approach to characterize a global pattern in temperature sensitivity of soil respiration. Ecological Society of America annual meeting at Portland, Oregon, August 1-6, 2004.
  97. Su, B., S. Wan, A.B. Tedla, D., Hui, Y. Luo, Litter decomposition and nitrogen dynamics of two dominant species as affected by artificial warming and clipping in a tallgrass prairie. Ecological Society of America annual meeting at Portland, Oregon, August 1-6, 2004.
  96. Tedla, A.B., B. Su, Y. Luo, L.L. Wallace, Carbon and nitrogen dynamics in experimentally warmed and clipped tallgrass prairie soil. Ecological Society of America annual meeting at Portland, Oregon, August 1-6, 2004.
  95. Zhou, X. A. Subedar, B. Su., M. Talley, Y. Luo, L.L. Wallace, Soil respiration in grasslands across a precipitation gradient from 400 to 1200 mm in the Great Plains. Ecological Society of America annual meeting at Portland, Oregon, August 1-6, 2004.
  94. Luo, Y., L. White, D. Hui, A two-pool model estimates faster fine root turnover than the exponential equation from carbon isotope data. Ecological Society of America annual meeting at Portland, Oregon, August 1-6, 2004.
  93. Hui, D. Y. Luo, and AmeriFlux participants. Controls of seasonal and Interannual variability in net ecosystem carbon exchange. Ecological Society of America annual meeting at Portland, Oregon, August 1-6, 2004.
  92. Johnson, D.W., J.A. Arnone, P. Verburg, L.L. Wallace, Y. Luo, and N. Zehrbach. Interannual climate variability and ecosystem processes in tallgrass prairie: Non-destructive measures of soil nutrients. Ecological Society of America annual meeting at Portland, Oregon, August 1-6, 2004.
  91. Sherry, R., L.L. Wallace, Y. Luo, Arnone, J.A., P. Verburg, D.W. Johnson, and D. Schimel. Interannual temperature and precipitation effects on grassland production, phenology and community structure, A field study. Ecological Society of America annual meeting at Portland, Oregon, August 1-6, 2004.
  90. Arnone, J.A., D.E. Schorran, D.W. Johnson, L.L. Wallace, Y. Luo, and D. Schimel. Plant species shifts codetermine tallgrass prairie NPP responses to international climate variability in the EcoCELLs. Ecological Society of America annual meeting at Portland, Oregon, August 1-6, 2004.
  89. Luo Y. and D. Hui. Interannual Variability in Net Ecosystem Exchange in Colorado Subalpine Forest: Partitioning into Causes between Climatic Variability and Functional Changes NIGEC PI meeting at New Orleans, June 15, 2004.
  88. Luo, Y. and nitrogen working group. Carbon and nitrogen interactions under elevated CO<sub>2</sub>. AmeriFlux/DOE Principle Investigators meeting.
  87. Luo, Y., D. Hui, T. Xu, L. White. Inverse analysis of FACE and eddy-flux data. AmeriFlux/DOE Principle Investigators meeting.
  86. Luo Y. and NCEAS N working group. Progressive nitrogen limitation of plant and ecosystem responses to rising atmospheric CO<sub>2</sub>: Introduction, patterns and mechanisms. Ecological Society of America annual meeting at Savannah, Georgia, August 4-8, 2003.
  85. Arnone, J., D. Schorran, D. Johnson, L. Wallace, Y. Luo, J. Coleman, D. Schimel, and P. Verburg,

- NSF-IRCEB interannual climate variability and ecosystem processes in tallgrass prairie: Effects on ecosystem CO<sub>2</sub> fluxes. Ecological Society of America annual meeting at Savannah, Georgia, August 4-8, 2003.
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  83. Sherry, R., Wallace, L., Y. Luo, N. Zehrbach. Phenological differences among winter annuals in warmed plots in tallgrass prairie. Ecological Society of America annual meeting at Savannah, Georgia, August 4-8, 2003.
  82. Wallace, L., R. Sherry, Y. Luo, N. Zehrbach, S. Wan. Phenological responses of tallgrass prairie to experimental warming and clipping. Ecological Society of America annual meeting at Savannah, Georgia, August 4-8, 2003.
  81. Su, B., s. Wan, A. Belay, D. Hui, and Y. Luo. Reducing carbon substrate affecting nitrogen availability in relation to soil respiration in a tallgrass prairie. Ecological Society of America annual meeting at Savannah, Georgia, August 4-8, 2003.
  80. Tao, X., D. Hui, Y. Luo and L. White. Modeling net ecosystem exchange using auto-regression model with exogenous inputs. Ecological Society of America annual meeting at Savannah, Georgia, August 4-8, 2003.
  79. Hui, D, X. Tao, Y. Luo and S. Wofsy. Quantitative assessment of climatic effects on seasonal and interannual variabilities in net ecosystem exchange. Ecological Society of America annual meeting at Savannah, Georgia, August 4-8, 2003.
  78. Wallace, L., Y. Luo, S. Wan and S. Bowdish. Recent Changes in the Southern Great Plains: Global Warming, Land Use and *Bison*? Great Plains Conference, Oklahoma City, October, 2002.
  77. Wan, S. and Y. Luo, Effects of clipping and shading on soil respiration in tallgrass prairie. Ecological Society of America annual meeting at Tucson, AZ, August 5-9, 2002.
  76. Liu, X., Y. Luo and L. Wallace, Relative effects of experimental warming on photosynthesis and respiration of C<sub>3</sub> and C<sub>4</sub> species in a tall grass prairie. Ecological Society of America annual meeting at Tucson, AZ, August 5-9, 2002.
  75. Luo, Y., L. White, E. DeLucia, A. Finzi, J. Lichter and W. Schlesinger, Sustainability of carbon sequestration in the Duke Forest ecosystem. Ecological Society of America annual meeting at Tucson, AZ, August 5-9, 2002.
  74. Leinonen, I.J. and Y. Luo, Quantifying the long-term carbon dynamics of forest ecosystems. Ecological Society of America annual meeting at Tucson, AZ, August 5-9, 2002.
  73. Su, B., D. Hui, P. Verburg, D. Obrist, J.A. Arnone, D. Johnson, R.D. Evens and Y. Luo. Canopy radiation- and water-use efficiencies of cheatgrass as affected by pulse and gradual N fertilization. Ecological Society of America annual meeting at Tucson, AZ, August 5-9, 2002.
  72. Verburg, P.S., J.A. Arnone, D. Evens, D. Leroux-Swarthout, D. Obrist, D.W. Johnson, Y. Luo and J.S. Coleman. The potential of short-rotation cropping systems to sequester C. Ecological Society of America annual meeting at Tucson, AZ, August 5-9, 2002.
  71. Bowdish, S.E., L.L. Wallace, Y. Luo and S. Wan. Effects of warming and clipping on plant species composition in the tallgrass prairie. Ecological Society of America annual meeting at Tucson, AZ, August 5-9, 2002.
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  68. Gonzalez-Meler, M., R. Matamala, J. Andrews, E. DeLucia, D. Ellsworth, G. Katul, Y. Luo, and W. Schlesinger. Use of stable isotopes to study the responses of ecosystem respiration in a forest exposed to elevated CO<sub>2</sub>. Ecological Society of America annual meeting at Madison, WI August 5-9,

2001

67. Luo, Y. Inverse analysis in ecology: A novel approach to untangling biocomplexity. Ecological Society of America annual meeting at Madison, WI August 5-9, 2001
66. Le Roux-Swarthout, D., S. Connin, P. Verburg, D. Johnson, J. Arnone, Y. Luo, R. Evans, Effect of single versus continuous nitrogen applications on ecosystem nitrogen losses. Ecological Society of America annual meeting at Madison, WI August 5-9, 2001
65. Le Dantec, V., Y. Luo, A. Turnipseed, J. Spark, P. Harley, R. Monson. Modeling of forest/atmosphere carbon fluxes in a Colorado subalpine ecosystem. Ecological Society of America annual meeting at Madison, WI August 5-9, 2001.
64. Wu, L. and Y. Luo. Dynamic simulations of litter decomposition. Ecological Society of America annual meeting at Madison, WI August 5-9, 2001
63. Liu, X., S. Wan, Y. Luo. Response of soil respiration to watering treatment in tallgrass prairie. Ecological Society of America annual meeting at Madison, WI August 5-9, 2001
62. Wan, S. Y. Luo, and L. Wallace. Warming and clipping effects on microclimate in tallgrass prairie: Implications for global warming and land-use change. Ecological Society of America annual meeting at Madison, WI August 5-9, 2001
61. Wallace, L. Y. Luo, S. Wan, and S. Bowdish. Grassland community responses to warming and clipping. Ecological Society of America annual meeting at Madison, WI August 5-9, 2001
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57. Luo, Y. Inverse analysis in ecology: A novel approach to untangling biocomplexity. AIBS 2001 Annual Meeting: From Biodiversity to Biocomplexity: A multidisciplinary step toward understanding our environment, Arlington, Virginia. March 24-26 2001.
56. White, L. and Y. Luo. Estimation of carbon transfer coefficients. Botany graduate seminar, Department of Botany of Microbiology, University of Oklahoma. November 2000.
55. Kaspari, M., Y. Luo, and M. Yuan. Toward the next generation of models exploring human impacts on biodiversity: multiscale analyses using remote sensing and GIS technologies. Oklahoma NASA EPSCoR proposal presentation competition. October 10, 2000
54. Luo, Y. Modeling study of forest carbon fluxes: a collaboration with Dr. R. Monson at the Niwot Ridge Eddy-flux site. The National Institute of Global Environmental Change PI meeting at New Orleans, September 29-30, 2000.
53. Kaspari, M., and Y. Luo. Human impacts on ecosystem biodiversity and functions: development of partnerships with NASA Goddard Space Flight Center. Oklahoma NASA EPSCoR Roundtable. September 19, 2000
52. Wan, S., Y. Luo, L.L. Wallace, P. Kores, L.R. Krumholz, L. Farber, M. Hoefnagels. Warming and clipping effects on tallgrass prairie: A preliminary study and its implication for global change. Ecological Society of America annual meeting at Snowbird from August 6-10, 2000
51. Hui, D., Y. Luo, and G. Katul. A search for a simple but predictive model of net ecosystem productivity from eddy-covariance data. Ecological Society of America annual meeting at Snowbird from August 6-10, 2000
50. Wu, L., Y. Luo. A modeling study of mineralization in Duke Forest soils under ambient and elevated CO<sub>2</sub>. Ecological Society of America annual meeting at Snowbird from August 6-10, 2000
49. Luo, Y. Progressive nitrogen limitation of plant and ecosystem responses to elevated CO<sub>2</sub>: A reexamination. Ecological Society of America annual meeting at Snowbird from August 6-10, 2000
48. Kattge, J., Y. Luo, and U. Grueters. Modeling autotrophic respiration for the DUKE forest: What the CO<sub>2</sub>-induced alterations implicate. Ecological Society of America annual meeting at Snowbird from



August 6-10, 2000

47. Luo, Y. Research procedure, philosophy, and strategy in modern science era. Department seminar, University of Oklahoma, Dec. 2, 1999.
46. Luo, Y. Global environmental change and terrestrial ecosystems. In the symposium Plant Responses to the Environment: From Molecules to Populations. Oklahoma Academy of Science, held in Oklahoma City, Nov 13, 1999
45. Luo, Y. J. Andrews, R. Matamala, and W. Schlesinger. Deconvolution analysis of root turnover and rhizosphere carbon processes in the Duke FACE site: An ecosystems approach. In New Phytologist Symposium: Root dynamics and global change: An ecosystem Perspective held at Townsend, Tennessee, Oct 19-22, 1999.
44. Luo, Y. Synthesis of FACE experiment and Eddy-Covariance Measurements. In Joint Science Team Meeting, DOE Terrestrial carbon Processes, Program of Ecosystem Research, and National Institute of Global Environmental Change held in Indianapolis, June 3-4, 1999.
43. Luo, Y., B. Medlyn, D. Hui, D. Ellsworth, and J.F. Reynolds. Elevated  $[CO_2]$  increases canopy carbon uptake in the Duke Forest. In the 16<sup>th</sup> International Botanical Congress held at St. Louis, MO, August 1-6, 1999.
42. Wan, S, D. Hui, and Y. Luo. Fire Effects on ecosystem nitrogen cycling: A meta-analysis. In the 16<sup>th</sup> International Botanical Congress held at St. Louis, MO, August 1-6, 1999.
41. Luo, Y., J.A. Andrews, R. Matamala, and W. H. Schlesinger. Elevated  $CO_2$  differentiates ecosystem carbon processes: A modeling analysis of Duke Forest FACE data. In annual ESA meeting held in Spokane, WA, 8-12 August 1999. Abstracts of the Ecological Society of America
40. Luo, Y. Global Scale Fertilization. In Joint Science Team Meeting, DOE Terrestrial carbon Processes, Program of Ecosystem Research, and National Institute of Global Environmental Change held in Indianapolis, June 3-4, 1999.
39. Hui, D., D.A. Sims, D.W. Johnson, W. Cheng, J.S. Coleman and Y. Luo. Canopy water and light use efficiency at elevated  $CO_2$ : A mesocosm study. In annual ESA meeting held in Spokane, WA, 8-12 August 1999. Abstracts of the Ecological Society of America
37. Cheng, W., D.A. Sims, Y. Luo, J.S. Coleman, D.W. Johnson. Sunflower canopy photosynthesis and respiration under elevated  $CO_2$ : Percent increase means what? In annual ESA meeting held in Spokane, WA, 8-12 August 1999. Abstracts of the Ecological Society of America
36. Luo, Y., D. Hui, W. Cheng, J.S. Coleman, D.W. Johnson, and D.A. Sims. Canopy quantum yield in a mesocosm study. In International Conference: Advances in Plant Ecophysiology held at York, U.K. Sept. 7-9 1998.
35. Hui, D., Y. Luo, W. Cheng, J.S. Coleman, D.W. Johnson, and D.A. Sims. Quantum yield, canopy development, and carbon fluxes in a mesocosm study. In annual ESA meeting held in Baltimore, Maryland 2-6 August 1998. Abstracts of the Ecological Society of America p.178.
34. Luo, Y., and J.F. Reynolds. A four-phase approach to evaluate scientific progress in plant- $CO_2$  research. In annual ESA meeting held in Baltimore, Maryland 2-6 August 1998. Abstracts of the Ecological Society of America p.89.
33. Cheng, W., J.T. Ball, J.S. Coleman, D. Johnson, W. Liu, Y. Luo, D. Schorran, D.A. Sims, E. Sotoodeh. An integrative study of shoot and root respiration under elevated  $CO_2$ . In annual ESA meeting held in Baltimore, Maryland 2-6 August 1998. Abstracts of the Ecological Society of America p.156.
32. Luo, Y., D. Murphy, M. Barbour, J. Fites, J. Reuter, W. Miller, R. Rowntree, and B. Noon. Lake Tahoe watershed assessment: Integration of physical, biological, and social/cultural processes. In Integration of GIS and multi-agent modeling techniques, Santa Fe Institute, New Mexico, March 19-22, 1998.
31. Luo, Y. Predicting responses of Duke forest to elevated  $CO_2$ : Extrapolation over time and space. In International Workshop: Representing structure and function in ecosystem models -- simplification vs. Complexity in approaches for regional and climate change assessments, Duke University, North Carolina, October 14-15. 1997.

30. Reynolds, J., J-L. Chen, J. Luan, and Y. Luo. Predicting responses of Duke forest to elevated CO<sub>2</sub>: Ecosystem regulation of plant dynamics. In International Workshop: Representing structure and function in ecosystem models -- simplification vs. Complexity in approaches for regional and climate change assessments, Duke University, North Carolina, October 14-15. 1997.
29. Ball, J.T., A.G. Peterson, A. Hoylman, W. Cheng, Y. Luo, J.S. Coleman, and D.W. Johnson, D. Schorran, D.A. Sims, and L. Sotoodeh, P. Ross. ECOCELL study IV: System level water use increased at elevated versus ambient CO<sub>2</sub>. In 3rd International IGBP-GCTE Workshop: Critical Assessment of the Response of Forest Ecosystems to Elevated Atmospheric Carbon Dioxide, Duke University, North Carolina, October 10-13 1997.
28. Hui, D., Y. Luo, J.T. Ball, W. Cheng, J.S. Coleman, D.W. Johnson, D. Schorran, D.A. Sims, and L. Sotoodeh. ECOCELL study III: Interactive effects of canopy development and elevated CO<sub>2</sub> on ecosystem carbon fluxes. In 3rd International IGBP-GCTE Workshop: Critical Assessment of the Response of Forest Ecosystems to Elevated Atmospheric Carbon Dioxide, Duke University, North Carolina, October 10-13 1997.
27. Sims, D.A., J.T. Ball, W. Cheng, J.S. Coleman, D.W. Johnson, Y. Luo, D. Schorran, J.R. Seemann, and L. Sotoodeh. ECOCELL study II: Effect of elevated CO<sub>2</sub> on distribution of leaf area and photosynthetic capacity within a sunflower canopy. In 3rd International IGBP-GCTE Workshop: Critical Assessment of the Response of Forest Ecosystems to Elevated Atmospheric Carbon Dioxide, Duke University, North Carolina, October 10-13 1997.
26. Cheng, W., J.T. Ball, J.S. Coleman, D.W. Johnson, W. Liu, Y. Luo, D. Schorran, D.A. Sims, and L. Sotoodeh. ECOCELL study I: Overall description and carbon budget. In 3rd International IGBP-GCTE Workshop: Critical Assessment of the Response of Forest Ecosystems to Elevated Atmospheric Carbon Dioxide, Duke University, North Carolina, October 10-13 1997.
25. Luo, Y., J.F. Reynolds, S.D. Smith. Comparative responses of ecosystems to elevated CO<sub>2</sub>: A modeling collaboration in the Duke Forest and Mojave Desert. In the 5<sup>th</sup> International Carbon Dioxide Conference, Cairns, Australia, September 8-12, 1997.
24. Sims, D.A., J.R. Seemann, and Y. Luo. Distinguishing leaf from whole plant level effects of CO<sub>2</sub> concentration on leaf acclimation. In annual ESA meeting held in Albuquerque, New Mexico 10-14 August 1997. Bulletin of the Ecological Society of America 78: 186
23. Luo, Y. and J.F. Reynolds. 1997. Can ecosystem CO<sub>2</sub> experiments be extrapolated to predict carbon sequestration? In annual ESA meeting held in Albuquerque, New Mexico 10-14 August 1997. Bulletin of the Ecological Society of America 78:136
22. Peterson, A.G. and CMEAL participants. 1997. Predicting photosynthetic responses to rising atmospheric carbon dioxide levels. In annual ESA meeting held in Albuquerque, New Mexico 10-14 August 1997. Bulletin of the Ecological Society of America 78:296 .
21. Raffiee, K., Y. Luo and S. Song. 1997. The economic cost of species preservation: the Northwestern Nevada Cui-ui. In the 72th Western Economic Association International Conference, Seattle, Washington. July 9-13.
20. J.R. Seemann, R.S. Nowak, S. D. Smith, Y. Luo. 1996. Response of desert vegetation to elevated atmospheric carbon dioxide: The NTS Desert FACE facility. In the international FACE science meeting. Durhan, North Carolina. 17-20 November, 1996
19. Luo, Y., D.A. Sims, 1996. Gradient studies of photosynthetic responses to CO<sub>2</sub>, light, and nitrogen. In annual ESA meeting held in Providence, Rhode Island 10-14 August 1996. Bulletin of the Ecological Society of America 77: 275.
18. Sims, D.A., Y. Luo, 1996. Comparative studies of photosynthetic acclimation to CO<sub>2</sub>, light, and nitrogen. In annual ERA meeting held in Providence, Rhode Island 10-14 August 1996. Bulletin of the Ecological Society of America 77: 409.
17. Luo, Y., K. Raffiee, and S. Song. 1996. Balancing recovery of endangered species and economic development in the Truckee River basin in the context of global change. In an international conference organized by Water Environment Federation, Proceedings of Watershed 1996: Moving Ahead Together. 509p.

16. Luo, Y. 1996. Issues in studying terrestrial carbon processes for quantifying carbon sinks. In the annual meeting of DOE TCP funding program held in Lake Tahoe, California 26-28 June 1996.
15. Luo Y. 1996. Whole-plant acclimation to elevated CO<sub>2</sub>: Gap between theory and data. In an IGBP-GCTE workshop of Plant Acclimation to Elevated CO<sub>2</sub> held in Lake Tahoe, California 19-23 May 1996.
14. Luo, Y. 1996. Potential terrestrial carbon sequestration is 2.5 times "the missing sink" in the Thirteen Annual Pacific Climate (PACCLIM) Workshop, Asilomar, Calif. April 14-17, 1996.
13. Luo, Y. 1995. An global terrestrial carbon sequestration model to quantify potential carbon sink. In an EPRI global carbon cycle modeling review meeting held in Garmisch-Partenkirchen, Germany, 1-4 October 1995.
12. Luo, Y. and J.T. Ball, 1995. Changes in global terrestrial carbon influx directly associated with an increase in atmospheric CO<sub>2</sub> concentration. In Global Analysis, Interpretation, and Modeling: First Science Conference held Garmisch-Partenkirchen, Germany, 25-29 September 1995.
11. Luo, Y. 1995. A conceptual framework to quantify ecosystem carbon sequestration in response to rising atmospheric CO<sub>2</sub> concentration. In an IGBP-GCTE workshop of Plant-Soil Carbon Belowground: The Effects of Elevated CO<sub>2</sub> held in Oxford, UK, 20-23 September 1995.
10. Sims, D.A., Y. Luo, and J.T. Ball, 1995. Photosynthetic acclimation to high CO<sub>2</sub> concentration varies with a plant's capacity to adjust leaf thickness and nitrogen concentration. In annual ERA meeting held in Snowbird, Utah 30 July - 3 August 1995. Bulletin of the Ecological Society of America 76: 245.
9. Luo, Y., D.A. Sims, and J.T. Ball, 1995. An analytic approach to estimate global terrestrial carbon influx and storage associated with an increase in atmospheric CO<sub>2</sub> concentration. In annual ERA meeting held in Snowbird, Utah 30 July - 3 August 1995. Bulletin of the Ecological Society of America 76: 162.
8. Luo, Y. 1995. Photosynthetic carbon uptake: coping with multiple stresses in scaling-up studies from leaf to globe. In an IGBP-GCTE workshop of Stress Effects on Future Terrestrial Carbon Fluxes held in Lake Tahoe, California 14-18 May 1995.
7. Luo, Y., H.A. Mooney, C.B. Field, J. Chen, and J.F. Reynolds, 1994. Applying GePSi to an annual grassland: A test of its generality. In Symposium of Modularity in Models of Plant Growth, annual meeting of International Society for Ecological Modeling, North American Chapter held in Knoxville, Tennessee, 7-11 August 1994. Proceedings, 26p.
6. Luo, Y., R.B. Jackson, C.B. Field, and H.A. Mooney, 1994. Responses of soil respiration to elevated CO<sub>2</sub> in two California grassland ecosystems. In annual meeting of ERA held in Knoxville, Tennessee, 7-11 August 1994. Bulletin of the Ecological Society of America 75: 139.
5. Luo, Y. H.A. Mooney, 1994. Global photosynthetic carbon uptake as stimulated by CO<sub>2</sub> increase in the atmosphere. In First GCTE Science Conference held in Woods Hole, Massachusetts, 23-27 May 1994, Book of Abstract, 41p.
4. Luo Y. 1994. Mechanisms of photosynthetic responses to elevated CO<sub>2</sub>. In EPRI 1993 Annual Review of Forest Response to CO<sub>2</sub> held at Incline Village, Nevada 11-14 January 1994.
3. Luo, Y. 1993. Stimulation of global carbon uptake by rising atmospheric CO<sub>2</sub> concentration. Symposium on Challenges in Atmospheric Chemistry and Global Change: Yesterday, Today and Tomorrow for celebrating the 60th birthday of Dr. Paul J. Crutzen held at National Center of Atmospheric Research, Boulder, Colorado, 5-7 December 1993.
2. Luo, Y., H.A. Mooney, and C.B. Field, 1993. An explanation of variable responses of photosynthesis and root/shoot ratio to elevated CO<sub>2</sub>. In annual meeting of ERA held in Madison, Wisconsin, 31 July-4 August 1993. Bulletin of the Ecological Society of America 74: 339.
1. Luo, Y. and P.S. Nobel, 1992. Carbon partitioning patterns and compartmental analysis for *Opuntia ficus-indica*. In annual meeting of ERA held in Honolulu, Hawaii, 9-13 August 1992. Bulletin of the Ecological Society of America 73: 256-257.

## STUDENTS, POST-DOCS, AND VISITORS

### Visiting students, professors and Scientists (31)

- 2013- pres. Xiankai Lu, Associate professor from South China Botanical Garden, the Chinese Academy of Sciences, China
- 2013- pres. Guangxuan Han, Associate Research Professor from Yantai Institute of Coastal Zone Research, Chinese Academy of Sciences, China
- 2013- pres. Qing Li, Visiting student from Tsinghua University, China.
- 2012- pres. Xiaoming Xu, Research Assistant Professor from Shanxi University, China
- 2012- pres. Wei Zhang, Assistant Professor from South China Botanical Garden, the Chinese Academy of Sciences, China
- 2012-2012. Xinfang Chen, Associate professor from Hehai University, China
- 2011-2012. Ruisen Luo, Visiting student from Zhejiang University, China.
- 2010-2011, Huajun Fang, Associate Professor, Institute of Geographical Sciences and Natural Resource Research, Chinese Academy of Science, Beijing, China.
- 2010-2011, Zhibin He, Associate Professor, Institute of Cold and Dry Region Environment and Engineering, Chinese Academy of Science, Lanzhou, China.
- 2009-2010, Guojing Yang, Associate Professor, Institute of Cold and Dry Region Environment and Engineering, Chinese Academy of Science, Lanzhou, China.
- 2009-2011, Lihua Zhou, Associate Professor, Institute of Cold and Dry Region Environment and Engineering, Chinese Academy of Science, Lanzhou, China.
- 2009-2011, Ding Guo, visiting student from Lanzhou University, China.
2009. Chuankuan Wang, Professor, Northeastern Forestry University, Herbin, China.
- 2008-2010. Xiaohong Jia, Associate Professor, Institute of Cold and Dry Region Environment and Engineering, Chinese Academy of Science, Lanzhou, China.
2008. Shuli Niu. Associate Professor, Institute of Botany, Chinese Academy of Sciences.
- 2007-09. Xiaoli Cheng, Associate Professor, Wuhan Botanical Garden, Chinese Academy of Sciences.
2006. Sarah Briden, Graduate student, University of West Virginia.
2006. 2007-09. Xian Xue, Associate Professor, Institute of Cold and Dry Region Environment and Engineering, Chinese Academy of Science, Lanzhou, China.
2006. Tao Wang, Director and Professor, Institute of Cold and Dry Region Environment and Engineering, Chinese Academy of Science, Lanzhou, China.
2006. Wenwei Ren, Associate Professor from Fudan University, Shanghai, China. Environmental Sustainability
- 2003-04 Yuan An, Associate Professor from Jiatong University, Shanghai, China. Grassland ecology.
2003. Jianchan Yang. Professor from Yangzhou Univesity, China. Physiological ecology
2002. 2003. Deqiang, Zhang, Associate Professor of South China Institute of Botany, Guangzhou, China. Global patterns of controlling factors of litter decompositions in terrestrial ecosystems
- 2001-2002. Meichun Yan from Nanjing Agricultural Univesity, China.
- 1999-2000. Asfaw Belay Tedla from Unviersity of Pretoria, South Africa
- 1999-2000. Antonio Cueto from Universidade de Santiago de Compostela, Spain.
- 1998-99 Shiqiang Wan. Ecosystem and watershed ecology.
1999. Belinda Medlyn from U. of Edinburgh. Modeling canopy carbon uptake in forests.
1998. Jesus M. Txurruka, Professor from U. of Basque Country, Spain. Growth modeling of *Arion ate*.
- 1997-98. Hui Dafeng from Yangzhou U, China. Ecosystem modeling.
1995. Xueli Cheng from Desert Research Institute, China. Ecophysiology of desert plants.

### Post-docs and research associates (a total of 31, currently 10)

- 2013-Pres. Rashid Rafique, Modeling analysis of coupled carbon-nitrogen cycles
- 2012-pres. Francesc Montané, modeling analysis of carbon cycle
- 2012-pres. Lifen Jiang, meta-analysis and lab management



2012-pres. Xia Xu, SOC dynamics  
 2012-pres. Jianwei Li, modeling of microbial processes  
 2011-pres. Liming Yan (Fudan), Terrestrial ecosystem responses to extreme hydrological events.  
 2011-Pres. Jianyang Xia , global modeling analysis of biogeochemical cycles.  
 2011-2013. Yaner Yan (Fudan), Emission and absorption of greenhouse gases by natural ecosystems in China.

2011-2013. Dejun Li, Deconvolution analysis of soil incubation data and modeling Tundra ecosystems responses to climate change.

2010-2011. Christina Schädel, Decomposition of soil organic matter.  
 2009-2012, post-doc, 2012-pres. Research Assistant Prof. Shuli Niu. Warming effects on carbon, water, and nutrient dynamics.  
 2008-2011. Yuanhe Yang, Nitrogen-carbon interactions during forest success and in response to elevated CO<sub>2</sub>.  
 2008-09. Xiaoli Cheng, Nutrient dynamics and litter decomposition under warming.  
 2007-2009, Xuhui Zhou, post-doc, 2009-2011. Assistant Research Professor, Inverse analysis.  
 2002-2008, Rebecca A Sherry, Research Associate; 2008-pres. Assistant Research Professor, Ecosystem carbon exchange under warming.  
 2007-2008. Wenping Yuan, Interannual variability of net ecosystem exchange of carbon and water.  
 2005. Tao Xu, Inverse analysis of biogeochemical cycles in terrestrial ecosystems  
 2005-07. Weng, Ensheng, Modeling ecosystem responses to multiple global change factors  
 2004. Asfaw Tedla. Microbial and genomic responses to experimental warming in tallgrass prairie.  
 2003-2005. Xiaoli Cheng. Trace emission from salt marsh (located in Fudan Univ. Shanghai, China)  
 2003-2005. Lifeng Jiang. Ecosystem C cycling in salt marsh (located in Fudan Univ. Shanghai, China)  
 2003-2005. Tao Zhou. Regional ecosystem modeling  
 2002-04. Dafeng Hui. Interannual variability in terrestrial ecosystem exchange of carbon and water.  
 2002-03. Ilkka Lenenoin, Modeling study of responses of Duke Forest to elevated CO<sub>2</sub>.  
 2000-02. Xiaodong Liu. Plant ecophysiology in response to global environmental change.  
 2000-01. Valérie Le Dantec. Modeling analysis of forest/atmosphere carbon exchange using eddy-flux data.  
 1999-2001. Lianhai Wu. Nutrient cycling in forests as affected by rising atmospheric [CO<sub>2</sub>]  
 1999-2000 Uwe Gruters. Hydrological cycle in forests as affected by rising atmospheric [CO<sub>2</sub>]  
 1998-99. Shi Kui Xue. Watershed ecology and modeling. (currently Senior Scientist, South Florida Water Management District [so-called Everglade Restoration Program])  
 1996-98. Andrew Peterson, Meta-data analysis.  
 1994-96. Daniel Sims. Plant physiological ecology.

Graduate students (a total of 35, currently 11, 9 at OU and 2 in China)

2013-pres. Nate Wilke (MS)  
 2013-pres. Junyi Liang (Ph.D.)  
 2011-pres. Xuecheng Cheng (Ph.D.) Litter decomposition  
 2011-pres. Amy Oliver (MS) Phosphorus changes in response to global warming.  
 2011-pres. Zheng Shi (Ph.D.) Data assimilation and ecological forecasting.  
 2011-pres. Guodong Zhang (Ph.D. in Fudan University)  
 2010-12. Esther Ali (MS) Soil carbon dynamics of tropical forest ecosystems after fire.  
 2010-pres. Xuan Qi (Ph.D.). Soil nitrogen dynamics in response to global change.  
 2009-2011. Zhongda Zhang (MS) Computer Sciences  
 2008-pres. Junjiong Shao (Ph.D) Interannual variability of net ecosystem exchange (located at Fudan Univ. Shanghai, China)  
 2008-pres. Oleksandra Hararuk (Ph.D) Modeling study of mercury dynamics in terrestrial

ecosystems.

- 2008-2012. Xia Xu (Ph.D.) Temperature sensitivity of soil organic matter.  
2007-2011. Shenfeng Fei (MS) Root ecology  
2007-2011. Ensheng Weng (Ph.D.) modeling analysis  
2006-09. Li Zhang (Ph.D.) Parameter estimation of ecosystem carbon process model at a southern China Forest (located at Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Science, Beijing)  
2006-08. Chao Gao (MS.) Inverse analysis of carbon processes at Duke Forest CO<sub>2</sub> experiment.  
2006-09. Yixin Wen (MS) carbon and nitrogen dynamics during litter decomposition (located at Fudan Univ. Shanghai, China)  
2005-2009. Meng Lu (Ph.D.) Meta-analysis of carbon and nitrogen interactions under fertilization (located at Fudan Univ. Shanghai, China)  
2004-2009. Jesse Bell (Ph.D.) Plant-soil water relationship under warming.  
2005-08. Ke Zhao (MS) carbon and nitrogen fluxes in coastal ecosystems (located at Fudan Univ. Shanghai, China)  
2005-07. Xiaowen Xu (MS) Thesis: “Conditional inversion to estimate parameters from eddy flux observations”.  
2004-07. Weimin Quan (Ph.D.) Biogeochemical cycles and food webs (located at Fudan Univ. Shanghai, China)  
2003-05. Xiaowen Wu (MS) modeling study of invasive effects on carbon and nitrogen cycles (located at Fudan Univ. Shanghai, China)  
2003-07. Chengzhang Liao (Ph.D.) Dissertation: “The effects of invasive alien plants on ecosystem carbon and nitrogen cycles: A case study of *Spartina alterniflora* invasion in the Yangtze estuary and a meta-analysis” (located at Fudan Univ. Shanghai, China)  
2003-07. Xuhui Zhou (Ph.D.) Dissertation: “Responses of soil respiration and ecosystem productivity to climate change in southern Great Plains”.  
2002-05. Afzal Subedar (MS). Thesis: “Effects of warming and clipping on carbon and nitrogen content and their isotope ratios in soil organic matter aggregates in a tall grass prairie ecosystem”.  
2001-04. Asfaw Tedla (MS) Thesis: “Carbon and nitrogen dynamics and microbial community structure of a tall grass prairie soil subjected to simulated global warming and clipping”.  
2000-02. Sara Bowdish (MS, coadvised with Linda Wallace). Thesis: “The effects of warming and land-use on species composition in the tallgrass prairie”  
2000-05. Bo Su (Ph.D.) Dissertation: “Interactions Between Ecosystem Carbon, Nitrogen and Water Cycles under Global Change: Results from Field and Mesocosm Experiments”.  
2000-2002. Shiqiang Wan (Ph.D.) Dissertation: “Responses of a Tallgrass Prairie to Experimental Warming”.  
1999-2002. Dafeng Hui (Ph.D.) Dissertation: “Experimental and Modeling Studies of Canopy Radiation and Water Use Efficiencies, Soil Respiration and Net Ecosystem Carbon Exchange”.  
Undergraduate and high school students (a total of 24, currently 2 in the lab)  
2013. Ashley Eddy  
2012. Mark Morrison  
2012. Shanshan Luo  
2011-2012. Erin Weese  
2010. Zak Barton  
2009. Kari Kerwin, Jonathon Whalen  
2008. Nathan Fite, Ecohydrological responses to climate change  
2008. Michael Kistenmacher, Modeling of species dynamics  
2007. Connor Ferguson from Norman High School: Summer intern.  
2007. Rachael Carnes from Hendrix College: Summer intern  
2007. Christopher Clary: Capstone project on soil crust in grasslands.

2006. William Snodgrass: Lab assistance  
 2004, summer. Jack Miller. Lab and office assistance.  
 2002-05. Taylor Clark, Assistance in literature study and office work.  
 2002 Ryan Hook from U. of Oklahoma. Ecosystem warming experiment.  
 2002-2003 Cody Sheik from U. of Oklahoma. Ecosystem warming experiment.  
 2001. Cassy Harnes from U. of Oklahoma. Ecosystem warming experiment.  
 2000. Tze-yuin Loh from U. of Oklahoma, ecosystem nitrogen cycling  
 2000-01. Gwen Cloud from U. of Oklahoma, biocomplexity and global warming effects on prairie.  
 1999. Edmond H. Mamou from Kalamazoo college, MI. Mathematical Ecology of carbon processes.  
 1999-2000. Luke Farbar from U. of Oklahoma, study global warming effects on tallgrass prairie.  
 1998. Vicker Rameker from Colorado State U. Human interactions in the Tahoe Basin ecosystems.  
 1995-97. Gavin Chandler from the University of Nevada, study plant responses to elevated CO<sub>2</sub>.  
 1994-95. Susan Pederson from the University of Nevada, study plant responses to elevated CO<sub>2</sub>.

#### Technician and Others (6)

2010. Wendy Martin, Lab management  
 2008-2009. Cory Buchanan, Construction of a warming and precipitation experimental facility.  
 2000-2010. Lynda Snake, accountant for financial management of research projects.  
 2002-03. Solja Lipitsainen. Field technician for the warming experiments.  
 2002-05. Nancy Zehrbach. Field/lab technician for the warming experiments.  
 2001-02. DeLora Mowery, Field technician for global warming studies.

### **PROFESSIONAL ACTIVITIES**

#### Invited seminars/talks

2013

Global Change Research 2013: Coupled Natural & Human Systems, Nanjing University of Information Science and Technology, Nanjing, China, June 18-20.  
 US-China Carbon Consortium annual meeting, Haikou, Hainan, China, June 14-17  
 The 7<sup>th</sup> ISOME: International Symposium on Modern Ecology, Guangzhou, China, June 9-15  
 Steve Pacala Lab, Department of Ecology and Evolution, Princeton University, April 29  
 EGU session Biospheric feedbacks on the Earth system, Vienna, Austria, April 9.  
 Institute of Botany, Chinese Academy of Science, China, Jan. 10  
 Annual meeting, Center for Earth System Science, Tsinghua University, China, Jan. 4

2012

Center for Earth System Science, Tsinghua University, Beijing, China Dec. 28  
 Institute of Tibet Plateau Research, Chinese Academy of Sciences, Beijing, China, Dec. 26.  
 Department of Plant Sciences, University of Illinois at Urbana-Champaign, Dec. 10  
 CSIRO, Atmosphere and Marine Science Division, Aspendale, Nov. 15  
 University of Melbourne, Melbourne, Australia, Nov. 12  
 CSIRO, Atmosphere and Marine Science Division, Canberra, Nov. 7  
 Australia National University, Canberra, Australia, Nov. 7  
 Macquarie University, Sydney, Australia, Oct. 26  
 RCN FORECAST New Investigators Conference, Woods Hole, MA, Oct. 8-11  
 Environmental Sciences Division, Oak Ridge National Laboratory, TN, July 10  
 3rd international young ecologist forum, Henan University, Kaifeng, China, June 12  
 Institute of Remote Sensing Applications, Chinese Academy of Sciences, Beijing, June 7  
 Institute of Botany, Chinese Academy of Sciences, Beijing, June 6  
 College of Global Change and Earth System, Beijing Normal University, Beijing, June 4.  
 Ecological lecture series, Fudan University, Shanghai, May 29-30  
 Public talk, Star Lecture Series, Fudan University, Shanghai, May 28  
 National Chiao-Tung University, Taiwan, May 21.

Institute of Geographical Sciences and Natural Resource Research, CAS, April 6.  
 DOE Workshop: Strategies to Promote Integrated Experiment-Model Approaches to Terrestrial  
 Ecosystem Study, Bethesda, Maryland, March 18-21  
 School of Natural Sciences, University of California, Merced, March 7-8  
 Department of Ecology and Evolution, University of California, Irvine, February 16-17  
 NIMBioS Investigative Workshop: Disturbance Regimes and Climate-Carbon Feedback, Knoxville, TN,  
 Feb 13-15

2011

DataONE-ILAMB workshop on cyberinfrastructure, NCEAS, Santa Barbara, CA, Nov. 14-17  
 27<sup>th</sup> New Phytologist symposium “Stoichiometric flexibility in terrestrial ecosystems under global  
 change. Biosphere 2, Oracle, AZ, USA, 25–28 September 2011  
 Department of Geological Sciences, University of Texas Austin, August 9,  
 Carbon Cycle and Climate Conference and 3<sup>rd</sup> Beijing International Summer School (BISS) on Climate  
 and Environment, Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China,  
 August 1-5.  
 The 6th International Symposium on Modern Ecology, “Key Topics in Ecology under Climate Change”,  
 Nanjing University, Nanjing, China, August 1-6.  
 Wuhan Botanical Garden, Chinese Academy of Sciences, Wuhan, China, July 21.  
 Northwest Institute of Plant Biology, Chinese Academy of Sciences, Xining, Qinghai, China, July 16.  
 Institute of Botany, Ukraine Academy of Sciences, Kiev, June 2  
 Department of Ecology, the National University “Kyiv-Mohyla Academy”, Kiev, Ukraine, June 1  
 “Beta-Gamma” Workshop, University of Exeter, UK, May 2-3.  
 Joint open conference by Institute of Global Change Studies, Tsinghua University and Global Change and  
 Earth System Sciences, Beijing Normal University, Beijing Normal University, Beijing, China. April  
 27.  
 Department of Biology, University of Illinois Urbana-Champaign, March 16.  
 1st INTERFACE meeting: How Do We Improve Earth System Models? Integrating Earth System  
 Models, Ecosystem Models, Experiments and Long-Term Data. Feb. 28 - March 3, Captiva Island,  
 Florida.  
 Institute of Biodiversity Science, Fudan University, Shanghai, China, Feb. 21  
 International Land Model Benchmarking (ILAMB) workshop, Irvine, CA, Jan 24-26.

2010

Washington University, Nov. 15  
 University of Wyoming, Oct. 15  
 Oklahoma Partial Differential Equation Workshop, Norman, Oklahoma, Oct. 8-9.  
 Fudan University Global Environmental Change Research Institute, Shanghai, China. May 19  
 University of Toronto, Ontario, Canada, Jan. 26.  
 Tsinghua University, Beijing, China, Jan. 18  
 Max Planck Institute of Biogeochemistry, Jena, Germany, Jan. 14.

2009

University of Alberta, Edmonton, Alberta, Canada, Dec. 4.  
 Keynote speech, ClimMani workshop “Climate change, effects on water availability and terrestrial  
 ecosystem responses”. in Basel, Switzerland, 21-23rd October 2009.  
 AmeriFlux annual meeting at DC, Sept. 21-23.  
 Keynote speech, 8<sup>th</sup> International Carbon Dioxide Conference, Jena, Germany, Sept 14-18.  
 High School teachers workshop, Oklahoma School of Science and Mathematics, Oklahoma City, June 10  
 Carbo-Extreme, European research project, Jena, Germany, June 2.  
 Fudan Ecology Summer School, Shanghai, China, May 22.



National Oceanic and Atmospheric Administration (NOAA) Earth System Research laboratory, Boulder, CO. April 2.

National Center for Atmosphere Research (NCAR) Land Modeling working group (LMWG) and Biogeochemistry working group (BGCWG) annual meeting, Boulder CO. March 30-April 1.

Department of Ecosystem Science and Management, Texas A&M University, March 24.

Blackland Research Center, Texas A&M University, Temple March 23.

North America Carbon Program 2<sup>nd</sup> open science conference, San Diego, CA, Feb. 19.

Department of Biological Sciences, University of Arkansas, Jan. 22.

Department of Ecology and Evolution, College of Life sciences, Fudan University (Jan. 4)

2008

Department of Biological Science, College of Life Sciences, Zhejiang University, China, Dec. 29

School of Life Sciences, Nanjing University, China, Dec. 25

China's Ecology Lecture Series, Chinese Academy of Sciences, Beijing, Dec. 21

Department of Ecosystem Science and Management, Texas A&M University, September 26.

Laboratoire des Sciences du Climat et de l'Environnement, UMR CEA-CNRS-UVSQ, France, June 9.

Land surface models and FluxNET data workshop, Edinburgh, UK June 5.

Department of Ecology, Nanjing Forestry University, May 23.

International Institute of Earth System Sciences, Nanjing University, May 23.

Southern China Botany Garden, Chinese Academy of Sciences, Guangzhou, China, April 30.

Department of Environmental and Natural Resources, Haiyin Engineering College, China, April 28.

2007

Department of Ecology, Beijing University, (Dec. 26)

Department of Ecology and Evolution, College of Life sciences, Fudan University (Dec. 20)

NSF workshop on data-model assimilation in ecology: Techniques and application, Norman, OK (Oct. 22-24)

AmeriFlux annual meeting, Boulder CO (Oct. 17-19)

International workshop on Automatic soil respiration measurement and analysis, Durham, New Hampshire, (Sep 10-12)

4<sup>th</sup> international conference on nitrogen, Salvador, Brazil (Oct. 1-5)

EcoVision seminar series, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing, China (May 21)

Oklahoma EPSCoR, Oklahoma City, (Apr 25)

C-QUEST open science meeting, Oxford, UK (Mar 26-28)

2006

Kessler Farm Field Laboratory seminar series, University of Oklahoma (Nov. 6)

Chinese Science and Technology Association, Changchun, China (Sept. 26).

Department of Physical and Atmospheric Sciences, Jackson State University, Mississippi (Sept 11)

Institute of Cold and Dry Region Environment and Engineering, Chinese Academy of Science (July 31)

NSF-funded workshop on effects of changes in precipitation on ecosystem functioning in terrestrial ecosystems in Helsingør, Denmark, (May 22-25)

Grazingland Research Laboratory, USDA, El Reno, Oklahoma (Feb. 24)

Symposium on Environmental Sustainability in Rapidly Developing Countries, Lessons from China to be held at the annual AAAS meeting at St Louis in February.

2005

Institute of Geographical Sciences and Natural Resource Research, Chinese Academy of Science (Dec. 30)

Labtea, Department of Ecology and Evolutionary Biology, Princeton University (Dec. 7)

Steve Pacala's lab, Princeton University (Nov. 22)  
 Ecology Graduate Program, Pennsylvania State University (Oct. 26)  
 Ecology Graduate Program, Rutgers University (Oct. 7)  
 Lars Hedin's lab, Princeton University (Sept 20)  
 Advance Training Class of Ecology, Fudan University, Shanghai, China (Jul. 8)  
 Institute of Geography and Natural Resources, Chinese Academy of Science (Feb. 24)  
 Program of geography, Beijing Normal University (Feb. 22)  
 Institute of Botany, Chinese Academy of Science, China (Feb 21)  
 Planning workshop on data-model fusion at Duke FACE, Durham, NC (Jan. 13-14)  
 NSF-funded workshop Modeling Ecosystem Responses to Global Change: Techniques and Recent Advances, Ft Myers, Florida (Jan. 9-12)

2004

Department of Ecology and Evolutionary Biology, University of Arizona (Feb. 9)  
 Department of Biological Science, University of Oregon (Jan. 28)  
 NSF-funded workshop, Carbon Respired by Terrestrial Ecosystems. (Jan. 21-23)

2003

College of Agricultural Sciences, Yangzhou University (Dec. 28)  
 Division of Biological Sciences, Kansas State University. (Nov. 20)  
 6<sup>th</sup> Meeting of the Carbon Cycle Science Steering Group, Arlington, VA (May 15)  
 International workshop on "CO<sub>2</sub> x Temperature Interactions" organized by Terrestrial Ecosystem Responses to Atmospheric and Climate Change, Lake Tahoe, CA (April 28-May 1).  
 Department of Environmental Science, Policy, and Management, University of California at Berkeley (Feb 10)

2002

Steve Wofsy's labs, Harvard University (May 2).  
 International workshop on "Transient and Long-Term Responses of Ecosystems to Warming and Elevated CO<sub>2</sub>" organized by Terrestrial Ecosystem Responses to Atmospheric and Climate Change, Durham, New Hampshire. (April 28-May 1).  
 2<sup>nd</sup> International conference on Astrobiology, Ames, California (April 7-11)  
 Department of Urban Environment, Beijing University, Beijing, China (March 21)  
 Institute of Botany, Chinese Academy of Science, Beijing, China (March 18)  
 College of Agronomy, Yangzhou University, Yangzhou, China (March 14)  
 College of Hydrological Science, Yangzhou University, Yangzhou, China (March 13)  
 Biodiversity Science Institute, Fudan University, Shanghai, China (March 9)

2001

6<sup>th</sup> International Carbon Dioxide Conference, Sendai, Japan (October 1-5)  
 College of Agriculture, Shanghai Jiaotong (transportation) University, Shanghai, China (March 22)  
 Institute of Applied Ecology, Chinese Academy of Science, Shenyang, China (March 14)  
 Workshop on the Rice-Wheat Free-Air CO<sub>2</sub> Enrichment (FACE) study organized jointly by Japan National Institution of Agro-Environmental Science and Institute of Soil Research, Chinese Academy of Science, Nanjing, China (March 5-9)  
 Workshop on Biocomplexity in Pinyon-Juniper Woodlands, Northern Arizona University (Jan. 29-31)  
 Department of Ecology, Evolution, and Organism Biology, The Ohio State University (Jan 11)

2000

Applied Biomathematics, Stony Brook, NY (Nov. 30)  
 Oklahoma School of Science and Mathematics (Nov. 28)

FACE2000, Synthesis of Free-Air CO<sub>2</sub> Enrichment (FACE) research results workshop at Tsukuba, Japan (June 23-30)

AmeriFlux NEP Workshop, Michigan (May 4-7)

Department of Plant Biology, University of Illinois at Urbana-Champaign (March 30)

Department of Biological Sciences, University of Illinois at Chicago (March 28)

Department of Plant and Soil Sciences, Oklahoma State University (January 24)

1999

Department of Biological Sciences, Tohoku University, Sendai, Japan (Dec)

National Institute of Agro-Environmental Sciences at Tsukuba, Japan (Dec)

Tohoku National Agricultural Experimental Station, at Morioka, Japan (Dec)

Symposium: Plant Responses to the Environment: From Molecules to Populations. Oklahoma Academy of Science, Oklahoma City (Nov)

Department of Botany, Oklahoma State University (September)

Department of Botany, Duke University (March)

1998

Department of Botany and Microbiology, University of Oklahoma

Department of Biological Sciences, University of Pittsburgh, Pennsylvania

Atmospheric Sciences Center, Desert Research Institute.

1997

Westvaco Forest Science Laboratory, South Carolina

Canada Centre of Remote Sensing, Ottawa, Canada

Daniel B. Warnell School of Forest Resources. University of Georgia.

An IGBP (International Geosphere-Biosphere Programme)-GCTE (Global Change and Terrestrial Ecosystems)/EUROFLUX Workshop "Representing structure and function in ecosystem models -- simplification vs. Complexity in approaches for regional and climate change assessments", Duke University, North Carolina.

Department of Integrative Biology, University of California, Berkeley

Department of Environmental Studies and Regional Planning, Washington State University.

Department of Biology, Hong Kong University of Science and Technology.

Department of Agronomy, Nanjing Agricultural University, China

Agricultural College, Yangzhou University, China.

1996

Department of Biology, New Mexico State University.

Department of Biology and Microbiology, South Dakota State University.

Annual meeting of the DOE Terrestrial Carbon Processes funding program, Lake Tahoe.

An IGBP-GCTE workshop "Plant Acclimation to Elevated CO<sub>2</sub>", Lake Tahoe, USA.

Center of Environmental Sciences and Resources, Portland State University

Center for Environmental Sciences and Education, Northern Arizona University

1995

An IGBP-GCTE workshop "Plant-Soil Carbon Belowground: The Effects of Elevated CO<sub>2</sub>", Oxford, UK.

An EPRI global carbon cycle modeling meeting, Garmisch-Partenkirchen, Germany.

An IGBP-GCTE workshop "Stress Effects on Future Terrestrial Carbon Fluxes", Lake Tahoe, USA.

Scripps Institution of Oceanography, University of California, San Diego

Jiangsu Agricultural College, Yangzhou University, China.

1994

International Society of Ecological Modeling. Symposium on Modularity in Models of Plant Growth.

1993

National Center of Atmospheric Research. Symposium on Challenges in Atmospheric Chemistry and Global Change: Yesterday, Today and Tomorrow.

Desert Research Institute, University and Community College System of Nevada.

Department of Botany, Duke University.

1992. Department of Biological Sciences, Stanford University.

1990. Department of Plant Biology, Carnegie Institution of Washington.

### Memberships

American Association for the Advancement of Science (1988-pres.).

American Association of Agronomy (1988-1998).

American Geophysical Union. (1998-pres.)

American Institute of Biological Sciences (1990-95, 2001-2005)

Crop Science Society of America (1988-1998).

Botany Society of America (2003-04)

Ecology Society of America (1988-pres.)

Soil Science Society of America (1988-1998).

Society for Experimental Biology, UK (2003-04).

### Advisory services

2013-2018. Chair of the scientific advisory committee for International Center for Ecology, Meteorology and Environment, Nanjing University of Information Science and Technology

2011-2016. External Advisory Committee for Center for Analysis and Predictions of storms, University of Oklahoma.

2010-2015. Steering committee for “An Integrated Network for Terrestrial Ecosystem Research on Feedbacks to the Atmosphere and Climate (INTERFACE): Linking experimentalists, ecosystem modelers, and Earth system modelers”

2009-pres. Science Advisory Board for the Max-Planck-Institute for Biogeochemistry, Germany

2009-pres. Scientific Steering Committee of the Earth Science Initiative of Tsinghua University, Beijing, China.

2009-2012. External Advisory Board for an European Union project “The terrestrial Carbon cycle under Climate Variability and Extremes – a Pan-European synthesis: *CARBO-Extreme*”

2000-2007 Steering Committee for “Terrestrial Ecosystem Responses to Atmosphere and Climate Change (TERACC), International Global Warming and Elevated CO<sub>2</sub> Research Consortium.”

### Editorial Services

Editorial boards, Global Change Biology (2009-pres.), Carbon Balance and Management (2012-pres.), Ecological Applications (2005-2009), Integrative Journal of Plant Biology (2005-pres.), Journal of Plant Ecology (2007-pres.), Acta Agronomica Sinica (2007-2011)

Guest editor, Biogeosciences (2013-2014) “Extreme Climate Events and Ecosystem Responses”; Journal of Geophysical Research-Biogeoscience (2012-2013) “data-model integration” (2012-13); Ecosphere (2012-2013) “Opportunities and Challenges of data assimilation” Journal of Plant Ecology (2011-12) for a special feature on “Plants, Temperature Stress, and Global Change: From Organism to Ecosystem.”

Guest editor, Ecological Applications (2009-2010) for an Invited Feature on Data assimilation and ecological forecasting.

Advisory boards to editors, Global Change Biology (2007-2008), New Phytologist (2007-2012).

Guest editor, Ecology (2004-06) for a special feature on Pool-Based Nitrogen Limitation Hypotheses.

### Review of portfolios of professors for tenure and promotion



Harvard University (2013)  
 Rutgers University (2012)  
 University of Maryland (2011)  
 University of California at Davis (2011)  
 Harvard University (2006)  
 Indiana University (2006)  
 University of California at Berkeley (2005)  
 University of California at Santa Cruz (2004)  
 University of Illinois at Chicago (2004)  
 University of Toledo (2000, 2002).

#### Review services

2011. Oversea reviewer on major grant proposals, National Science Foundation of China.  
 2008. Panel for the Midwest Center of the National Institute of Climate Change Research. Oct.  
 2006. Panel for the Northeast Center of the National Institute of Climate Change Research. April.  
 Oversea reviewers of applications to Changjian Scholarship program, China's Minister of Education (2005, 2006)  
 2004. Scientific Program Panel Review on DOE Consortium for Research on Carbon Sequestration in Terrestrial Ecosystems (CSITE). 8-9 December 2004, Washington, DC  
 2002. WESTGEC Regional Scientific Review Board of National Institute of Global Environmental Change (NIGEC), US DOE.  
 2000. Panelist for the NSF Biocomplexity program.  
 1994-pres. Review grant proposals for  
   EPA (Environmental Protection Agency), Water and Watersheds  
   NSF (National Science Foundation), International, Ecosystem, Evolution and Ecology Physiology, Biocomplexity.  
   USDA NRI (Department of Agriculture, National Research Initiative), Plant responses.  
   DOE Terrestrial Carbon Processes  
   NICCR (National Institute of Global Environmental Change), US Department of Energy  
   NIGEC DOE (National Institute of Global Environmental Change, Department of Energy)  
   Water Resources Research, Regional Competitive Grants Program, Western Region  
 1994-pres. Review papers for Science, Nature, Nature Climate Change, Ecology, Ecological Applications, Global Biogeochemical Cycles, Journal of Geophysical Research, Oecologia, Ecological Modeling, Plant, Cell & Environment, Global Change Biology, Tree Physiology, Functional Ecology, Environmental Science -- International Journal of Policy & Research, Plant Ecology, New Phytologists, Annals of botany, Environmental Science & Technology, Physiologia Plantarum, Acta Ecologica Sinica, Ecology Letter.  
 1989-92. Associate editor. CAASS (Chinese Association of Agricultural Students and Scholars in America) Journal.  
 1981-85. Editor for English abstracts. Journal of Jiangsu Agriculture College, China.

#### Organization of national and international workshops, conferences, and symposia (35)

2012-2015, Organizer, a National Institute for Mathematical and Biological Synthesis (NIMBioS) working group on "Non-autonomous system and terrestrial carbon cycle".  
 2012-2013, Co-organizer, an EGU session: Climate extremes, ecosystems and biogeochemical cycles, Vienna, 7-12 April 2013.  
 2012-2013, Co-organizer, an EGU session: Developments in terrestrial biogeochemical models using model-data integration, Vienna, 7-12 April 2013.  
 2012-2013, Co-Organizer, the 9<sup>th</sup> International Carbon Dioxide Conference, Beijing, China, June 3-7, 2013  
 2012, Co-organizer of an AGU session: improving terrestrial biogeochemical models through integrating models with data. San Francisco December 3-7  
 2011-2013, Co-organizer of a joint USA-Europe conference: Climate extremes and their impact on

- ecosystems and biogeochemical cycles at Obergurgl, Austria April 2 - 5, 2013
- 2011-2012, Co-organizer of European Union of Geosciences (EGU) session BG1.6: Climate extremes, ecosystems and biogeochemical cycles. Vienna, Austria, 22 – 27 April 2012
- 2011-2012, Organizer of an open conference on data assimilation and ecological forecasting at Woods Hole, October 2012.
- 2011-2012, Chair of the organizing committee for DOE workshop: Strategy to promote integrated experiment-model integration approaches to terrestrial ecosystem study. Washington DC, March 19-21, 2012.
- 2011-2012. Organizer of National Institute for Mathematical and Biological Synthesis (NIMBioS) Investigative Workshop: *Integration of disturbance ecology and biogeochemistry to predict future dynamics of terrestrial carbon cycle under global change*. Knoxville, Tennessee, USA, Feb 13-15, 2012
2011. Co-organizer of a conference “How Do We Improve Earth System Models: Integrating Earth System Models, Ecosystem Models, Experiments and Long-Term Data”, Captiva Island, FL, February 28 –March 3.
2010. Co-organizer of an AGU session “Data assimilation to improve biogeochemical models across multiple scales”, San Francisco, December.
2010. Co-organizer of an organized oral session “Long-term warming experiment: what we have learned and what is unknown” at ESA annual meeting, Pittsburgh, PA, August.
2010. Co-organizer of an organized oral session “Combining Experiments, Process Studies, and Models to Forecast the Future of Ecosystems, Communities, and Populations” at ESA annual meeting, Pittsburgh, PA, August.
2010. Organizer of a workshop “Data assimilation and ecological forecasting” held at NEON HQ, Boulder CO, July
2009. Co-organizer of a symposium: “The role of biodiversity for ecosystem processes and services under climate change” for the DIVERSITAS Open Science Conference, Cape Town, October.
- 2008-11. Co-organizer of National Center for Ecological Analysis and Synthesis working group on Benchmarking ecosystem response models with experimental data from long-term CO<sub>2</sub> enrichment.
- 2008-09. Organizing committee for North America Carbon Program open science meeting, February 2009, San Diego. CA
- 2008-09. Co-organizer of New Phytologist Symposium: Carbon cycling in tropical forests, Guangzhou, China, November 2009.
2008. Organizer of an Ecological Society of America Symposium “Toward ecological forecasting, Applications of data-model fusion techniques.
2007. Organizer of a NSF workshop: Data-Model Assimilation in Ecology: Techniques and Applications to be held at Norman, Oklahoma in October
2007. Organizer of one session in Annual AmeriFlux meeting on “Data assimilation and uncertainty analysis”
2007. Co-organizer of organized oral session for 2007 ESA meeting: Ecosystem responses to experimental warming and other global change factors to be held in San Jose, CA in August
2007. Co-organizer of an international symposium for the 2007 Eco-Summit: Back to the Primaries of Ecosystem Mass Transfer: Carbon and Water Cycles, to be held in Beijing, China in May
- 2006 Organizer of the symposium on Environmental Sustainability in Rapidly Developing Countries, Lessons from China held at the annual AAAS meeting at St Louis in February, 2006.
2006. Co-organizer of the international workshop on effects of changes in precipitation on ecosystem functioning in terrestrial ecosystems held in Helsingore, Denmark, May 2006
2005. Co-organizer of an international workshop on Modeling Ecosystem Responses to Global Change: Techniques and Recent Advances held at Sannibel, FL in January 2005.
2003. Organizer of ESA symposium “Progressive Nitrogen Limitation of Plant and Ecosystem Responses to Elevated CO<sub>2</sub>”

- 2003. Co-organizer of an international workshop on interactive responses of ecosystems to elevated CO<sub>2</sub> and global warming held at Lake Tahoe, CA.
- 2002 Co-organizer of the international workshop on Transient and long-term responses of ecosystems to elevated CO<sub>2</sub> and global warming.
- 2000. Co-organizer of the International conference FACE 2000 at Tsukuba, Japan
- 1997. Co-organizer of an international symposium "Changing Water Regime in Drylands" held at Lake Tahoe, California, June 9-13, 1997.
- 1996. Chair of the poster session "Plant Physiology: Effects of external variables" in ESA meeting at Providence, August, 1996
- 1996. Co-organizer of an IGBP-GCTE international workshop on plant acclimation to elevated CO<sub>2</sub> held at Lake Tahoe, May 19-23, 1996.
- 1995. Co-organizer of an IGBP-GCTE international workshop "Stress Effects on Future Terrestrial Carbon Fluxes" held at Lake Tahoe May 14-18, 1995.

#### Other synergistic activities

- 2011-2012. National Climate Assessment, Biodiversity/Ecosystems/Ecosystem Services Chapter, Technical Input.
- 2009-2014, Contributing author, Intergovernment Panel of Climate Change (IPCC) 5<sup>th</sup> Assessment Report.
- 2002-04. Working group member, IBRCS (Infrastructure for Biology at Regional to Continental Scales) – a version of NEON (National Ecological Observation Network), American Institute of Biological Sciences.
- 2001. Invited participant for the strategic planning meeting on the National Phytotron at Duke University, Durham, NC. (Oct. 25-27)
- 2001. Member, the US science delegation to participate the 9<sup>th</sup> US-Japan workshop on global change, Tokyo, Japan (Oct. 8-10)
- 2001. Invited participant, workshop on nonlinear responses to global environmental change: critical thresholds and feedbacks. Durham, NC May 26-29.
- 2000-2003. Leader of an international working group on carbon and nitrogen interactions under elevated CO<sub>2</sub>, sponsored by NCEAS.
- 2000-01. Chair, Asian Ecology Section, Ecological Society of America
- 1999. Invited participant, An IGBP (International Geosphere-Biosphere Programme)-GCTE (Global Change and Terrestrial Ecosystems) Workshop ""Intercomparison of Gap Models and Examination of How Much Physiology is Needed in Them" Pingree Park (Colorado). (July)
- 1999. Judge for the Billings Award and the Graduate Student Poster Award, Ecological Society of America.
- 1998-99. Science Core Team member for the Lake Tahoe Basin Watershed Assessment, US Forest Service

#### Institutional Services (University of Oklahoma)

- 2011-2012. Search Committee for Regional Climate science position, Department of Meteorology.
- 2010-2011. Search Committee for a plant ecology position, Department of Botany and Microbiology.
- 2010-pres. Graduate Admission Committee, Department of Botany and Microbiology
- 2009. Search Committee for mathematics professor
- 2008. A planning committee on development a new degree program in Geospatial Information and Sustainability Science (GISS), College of Atmospheric and Geographic Sciences
- 2008. Graduate student recruitment committee, Department of Botany and Microbiology
- 2007-2009. Graduate Admission Committee, Department of Botany and Microbiology
- 2007-08, Search Committee for Data assimilation and radar mechanics in meteorology.
- 2006-07. Search committee for Remote Sensing and GIS, Department of Geography
- 2006-07. Search committee for Microbial Ecology, Department of Botany and Microbiology.
- 2006-2009. Committee member on University Research Council, the University of Oklahoma.
- 2004-05. Executive committee for Ecology, Evolutionary Biology graduate program

2004-05. Search Committee for Environmental Microbiologist, Dept. of Botany and Microbiology.  
 2003-04. Search Committee for Chinese Politics Professorship, International Study Program  
 2003. Search Committee for Ecologist/Statistician, Department of Zoology, Univ. of Oklahoma  
 2003. Committee member on University Research Council, the University of Oklahoma.  
 2001-04. Leading a task force to establish a graduate program in Ecology and Evolutionary Biology.  
 2001-pres. Promotion committee. Department of Botany and Microbiology, Univ. of Oklahoma.  
 2001-2003. Committee for the Support of Teaching and Research, College of Arts and Sciences, University of Oklahoma  
 2001-05. Adviser for Chinese Student and Scholar Association at the University of Oklahoma.  
 2001-02. Search committee for a faculty position: Geomicrobiology. Department of Botany and Microbiology, University of Oklahoma.  
 2001. *Ad hoc* Committee for evaluating the New Program "Master of Science in Natural Gas Engineering & Management". Graduate College, University of Oklahoma.  
 2000. Planning committee of Global Environmental Studies, International Programs Centers, University of Oklahoma.  
 1999-pres. Greenhouse committee, Department of Botany and Microbiology, Univ. of Oklahoma. (2001-, Committee Chair)  
 1999-pres. Committee for the George Lynn Cross Lecturer, University of Oklahoma.  
 1999-2001. Budget Committee, Department of Botany and Microbiology, University of Oklahoma.  
 1999-pres. Undergraduate Advising Committee, College of Art and Science, University of Oklahoma  
Institutional Services (Desert Research Institute, University of Nevada Reno)  
 1998 Search Committee for the position of root physiologist at UNR.  
 1998 Search Committee for the position of professional writer at DRI.  
 1998 Search Committee for the position of Ecologist at DRI.  
 1997 Curriculum Committee of the EECB graduate program  
 1997 Search Committee for the position of Ecosystem Ecologist at DRI.  
 1997-98. Nevada Metal Fellowship Selection Panel at DRI  
 1996-97 Search Committee for the position of Executive Director of Biological Sciences Center at DRI.  
 1996 Chair, Search Committee for the position of Assistant Research Professor at DRI.  
 1995-96 Project PI representing DRI in the Mojave Desert FACE study.  
 1995- Student comprehensive examination committee for the graduate program of EECB.  
 1995-97. The Colin Warden Award committee for best student research papers at DRI.  
 1995-98. Hosting seminar speakers for the graduate program of EECB.