CURRICULUM VITAE

Guangsheng Chen
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Education:

- Ph.D. (2004-2010), School of Forestry and Wildlife Sciences, Auburn University, AL, USA. Major in Ecology
- M.S. (2001-2004), Institute of Applied Ecology, Chinese Academy of Sciences, Shenyang, China. Major in Ecology; Specific orientation: biogeochemical cycling of forest ecosystems
- B.A. (1997-2001), Jiangxi Agriculture University (JXAU), Nanchang, Jiangxi Province, China. Major in Forestry

Research and Teaching Experience:

- Postdoctoral research associate (2013-present), Climate Change Science Institute & Environmental Sciences Division, Oak Ridge National Laboratory
- Postdoctoral research fellow (2010-2012), International Center for Climate and Global Change Research and School of Forestry and Wildlife Sciences (SFWS), Auburn University
- Occasional substitute lecturer for a course (2008 spring): Frontier in Global Change Ecology (FORY 8930). SFWS, Auburn University.
- Occasional substitute lecturer for a course (2007 spring): Advanced Ecosystem Modeling (FORY 8970). SFWS, Auburn University.
- Teaching Assistant for a course (2006 fall): GIS Applications in Natural Resources (FORY 5470). SFWS, Auburn University.
- Teaching Assistant for a course (2005): Global Biogeochemical Cycles (FORY 8970). SFWS, Auburn University
- Research Assistant (2004-2010). SFWS, Auburn University

Research Interests:

- Based on systems approaches and tools (ecosystem and land surface modeling, Geographic Information System, remote sensing, and data-model integration), my primary research interest is to quantify the effects of multiple environmental factors (e.g., climate, land use change, atmospheric CO_2 concentration, and nitrogen deposition), intensive land management (e.g., harvesting, prescribed fire, site preparation, fertilization, and irrigation), as well as natural disturbances (e.g., extreme climate events, hurricane & storm, wildfire, and insects & diseases) on

carbon (gross/net primary productivity, CO_2 fluxes, carbon stock, CH_4 fluxes, etc.), hydrological (evapotranspiration, runoff, water yield, soil moisture, etc.), and nitrogen (nitrogen stock, N_2O fluxes, etc.) cycles in the terrestrial ecosystems.

Technical Proficiency:

- Statistical analysis (SPSS and R program); Spatial analysis with GIS (ArcMap/ArcInfo); C++ and python programming; NCAR Command Language (NCL); Remote sensing (ERDAS Imagine and ENVI); Data fusion

Professional Memberships:

- 2005-present: Ecological Society of America (ESA)
- 2005-present: American Geophysical Union (AGU)
- 2013-present: Permafrost Carbon Network (PCN)
- 2008-present: North American Carbon Program (NACP)

Dissertation/Thesis:

- PhD dissertation: Effects of disturbance and land management on water, carbon, and nitrogen dynamics in the terrestrial ecosystems of the southern United States. PhD dissertation, Auburn University, Auburn, AL. 2010. p222.
- Master of Science thesis: Tree foliar nutrient resorption, nutrient use efficiency and cycling in forest ecosystems under strong human disturbances. Institute of Applied Ecology, Chinese Academy of Sciences, Shenyang, China. 2004.
- Bachelor thesis: Impacts of balanced fertilization on the growth and yields of bamboo shoot (*Phyllostachys heterocyla* cv. *Pubescens*). Jiangxi Agricultural University, Nanchang, China. 2001.

Professional Experience:

<u>Reviewer for Journals:</u>

- Biogeosciences; Ecological Modelling; Climatic Change; Forest Ecology and Management; Environmental Science and Technology; Journal of Geophysical Research-Biogeosciences; PLOS ONE; The Scientific World Journal; Advances in Meteorology; Frontiers of Earth Science; Acta Ecologica Sinica; Ecological Engineering; Journal of Hydrology; Hydrology and Earth System Sciences; Environmental Management; Remote Sensing; Environment Pollution; Forests; Catena; Chinese Geographical Science; Advances in Atmospheric Sciences; Science of the Total Environment

<u>Editorial Board:</u>

- The Scientific World Journal (2013-)

Participated Projects:

- Model-data fusion approaches for retrospective and predictive assessment of the pan-Arctic scale permafrost carbon feedback to global climate. DOE Early Career Award. 2012-2017. PI: Dr. D.J. Hayes.
- Developing a Cost-Effective Payment System for Forest Carbon Sequestration. USDA Agriculture and Food Research Initiative (AFRI). 2014-2017. PI: Seong-Hoon Cho.
- Regional Forest Productivity and Carbon Storage in Southern United States: Roles of Land-use/cover Change, Intensive Management and Disturbances. USDA CSREES. 2007-2010. PI: Dr. H. Tian Effects of Intensive Management on Carbon Sequestration in Pine Forests in the Southeastern United States. Southern Forestry Research Partnership (SFRP). 2008-2009. PI: Dr. H. Tian.
- Effects of Multiple Changes in Climate and Atmospheric Composition on Terrestrial Ecosystem Structure and Functioning in the Southeastern United States: A Regional Synthesis with Data-Model Assimilation. DOE NICCR Program. 2006-2009. PI: Dr. H. Tian
- Impact of land-use change on carbon sequestration in Alabama: An interdisciplinary research linking ecosystem processes with economical development. Alabama Agricultural Experiment Station (AAES) research funding. 2005-2008. PI: Dr. H. Tian.
- Linking Multi-scale Remotely Sensed Data, Field Observations and Biogeochemistry Models to Evaluate Changes in the Terrestrial Ecosystems of China. NASA Interdisciplinary Science Program. 2004-2008.

Publications:

Submitted or in Preparation:

- **Chen, G.**, H. Tian, D. Hayes, S. Prior, et al. 2015. Effects of increasing planted forest area on water balance in the Southern United States. *Forest Ecology and Management* (Submitted)
- Koven, C.D., E.A.G. Schuur, C. Schadel, T. Bohn, E.J. Burke, **G. Chen**, et al. 2015. A simplified, data-constrained approach to estimate the permafrost C-climate feedback**.** *Philosophical Transactions of the Royal Society A* (Submitted).
- Hayes, D., **G. Chen**, et al. 2015. Model and Inventory Perspectives on the Role of Forests in the Global Carbon Cycle: Results from the Multi-scale Synthesis and Terrestrial Model Intercomparison Project (MsTMIP). *Forest Ecology and Management* (in Prep.).
- Goswami, S., D.J. Hayes, P. Kuhry, G. Hugelius, G. Grosse, C. Schaedel, D. Olefeldt, **G. Chen**, et al. 2015. A pan-Arctic regionalization for mapping vulnerability of permafrost carbon to climate change. (in Prep.)
- **Chen, G**., D. Hayes, H. Tian, et al. 2015. Changing planted forest area and management practices on greenhouse gas balance in the United States (in Prep.).
- Ye, Q., X. Yang, S. Dai, **G. Chen**, et al. 2015. Effects of climate change on suitable rice cropping areas, cropping systems and crop water requirements in the southern China. *Agricultural Water Management*. (Submitted).

Published in Peer-Reviewed Journal:

- Bohn, T.J., J.R. Melton, A. Ito, T. Kleinen, R. Spahni, B.D. Stocker, B. Zhang, X. Zhu, R. Schroeder, M.V. Glagolev, S. Maksyutov, V. Brovkin, **G. Chen**, et al. 2015. WETCHIMP-WSL: intercomparison of wetland methane emissions models over West Siberia. *Biogeosciences Discuss*, 12, 1907-1973 (in press).
- Tian, H., **G. Chen**, C Lu et al. 2015. Global methane and nitrous oxide emissions from terrestrial ecosystems due to multiple environmental changes. Ecosystem Health and Sustainability 1(1):4. http://dx.doi.org/10.1890/EHS14-0015.1 (In press).
- Kuang, W., Y. Liu, Y. Dou, W. Chi, **G. Chen**., et al. 2015. What are hot and what are not in an urban landscape: quantifying and explaining the land surface temperature pattern in Beijing, China. *Landscape Ecology* 30: 357-373.
- Tian, H., **G. Chen**, C. Lu, X. Xu, et al. 2014. North American terrestrial CO_2 uptake largely offset by CH_4 and N_2O emissions: toward a full accounting of the greenhouse gas budget. *Climatic Change*, DOI 10.1007/s10584-014-1072-9.
- Yang, Q., H. Tian, X Li, B. Tao, **G. Chen**, et al. 2014. Spatiotemporal patterns of evapotranspiration along the North American east coast as influenced by multiple environmental changes. *Ecohydrology*, DOI: 10.1002/eco.1538 (in press)
- Zhu W, **Chen G**, Jiang N, Liu J, Mou M. 2013. Estimating Carbon Flux Phenology with Satellite-Derived Land Surface Phenology and Climate Drivers for Different Biomes: A Synthesis of AmeriFlux Observations. *PLoS ONE* 8(12): 1-10. doi:10.1371/journal.pone.0084990
- Jiang, N., W. Zhu, Z. Zheng, **G. Chen**, and D. Fan. 2013. A Comparative Analysis between GIMSS NDVIg and NDVI3g for Monitoring Vegetation Activity Change in the Northern Hemisphere during 1982–2008. *Remote Sensing 5*(8), 4031-4044, doi:10.3390/rs5084031.
- **Chen, G.**, H. Tian, C. Huang, S. Prior, and S. Pan. 2013. Integrating a process-based ecosystem model with Landsat imagery to assess impacts of forest disturbance on terrestrial carbon dynamics: Case studies in Alabama and Mississippi. *Journal of Geographic Research* DOI: 10.1002/jgrg.20098.
- Song, X., H. Tian, X. Xu, D. Hui, **G. Chen**, et al. 2013. Projecting terrestrial carbon sequestration of the southeastern United States in response to climate and atmospheric changes in the 21st century. *Ecosphere* 4(7), 88. htp://dx.doi.org/10.1890/ES12-00398.1.
- Melton, J.R., R. Wania, E. Hodson, B. Poulter, B. Ringeval, R. Spahni, T. Bohn, C.A. Avis, D. Beerling, **G. Chen**, and other participants for WETCHIMP project. 2013. Present state of global wetland extent and wetland methane modelling: conclusions from a model intercomparison project (WETCHIMP). *Biogeosciences*, 10, 753-788.
- Wania, R., J.R. Melton, E. Hodson, B. Poulter, B. Ringeval, R. Spahni, T. Bohn, C.A. Avis, D. Beerling, **G. Chen**, and other participants for WETCHIMP project. 2013. Present state of global wetland extent and wetland methane modelling: methodology of a model intercomparison project (WETCHIMP). *Geoscientific Model Development* 6: 617-641.
- Wang, L., H. Tian, C. Song, X. Xu, **G. Chen**, W. Ren, C. Lu. 2012. Net exchanges of CO_2, CH_4 and N_2O between marshland and the atmosphere in Northeast China as

influenced by multiple global environmental changes. *Atmospheric Environment* 63: 77-85.

- Chen, F., K.J. Niklas, **G. Chen**, D. Guo. 2012. Leaf traits and relationships differ with season as well as among species-groupings in a managed Southeastern China forest landscape. *Plant Ecology* 213: 1489-1502.
- Tian, H.Q., C. Lu, **G. Chen**, B. Tao, S. Pan, S.J. Del Grosso, X. Xu, L. Bruhwiler, S.C. Wofsy, E.A. Kort, S.A. Prior. 2012. Contemporary and projected biogenic fluxes of methane and nitrous oxide in terrestrial ecosystems of North America. *Frontiers in Ecology and the Environment* 10: 528-536.
- **Chen, G**., H. Tian, C. Zhang, M. Liu, W. Ren, W. Zhu, A. Chappelka, S.A. Prior, G. Lockaby. 2012. Drought in the southern United States over the last century: Variability and its impacts on terrestrial ecosystem productivity and carbon storage. *Climatic Change* 114: 379-397.
- **X**u, X., H. Tian, **G. Chen**, M. Liu, W. Ren, C. Lu, C. Zhang. 2012. Multiplefactor controls on terrestrial N2O flux over North America from 1979 through 2010. *Biogeosciences* 9, 1351-1366. DOI: 10.5194/bg-9-1351-2012.
- Zhang, C., H. Tian, **G. Chen**, A. Chappelka, X. Xu, W. Ren, D. Hui, M. Liu, C. Lu, S. Pan, and G. Lockaby. 2012. Impacts of urbanization on carbon balance in terrestrial ecosystems of the Southern United States. *Environmental Pollution* 164: 89-101.
- Liu, M., H. Tian, C. Lu, X Xu, **G. Chen**, W. Ren. 2012. Effects of multiple environmental stresses on evapotranspiration and runoff over the eastern China, *Journal of Hydrology* 426-427: 39-54. DOI:10.1016/j.jhydrol.2012.01.009. (In press)
- Tian, H.Q., **G. Chen**, C. Zhang, M. Liu, G. Sun, A. Chappelka, W. Ren, X. Xu, C. Lu, S. Pan, H. Chen, D. Hui, S. McNulty, G. Lockaby, and E. Vance. 2012. Century-scale response of ecosystem carbon storage and flux to multiple environmental changes in the southern United States. *Ecosystems* 15: 674–694.
- Lu, C., H. Tian, M. Liu, W. Ren, X. Xu, **G. Chen**, and C. Zhang. 2012. Effect of nitrogen deposition on China's terrestrial carbon uptake in the context of multiple environmental changes. *Ecological Applications* 22:53–75.
- Richardson AD, Anderson RS, Arain MA, Barr AG, Bohrer G, **Chen G** and other NACP participants. 2012. Terrestrial biosphere models need better representation of vegetation phenology: Results from the North American Carbon Program Site Synthesis. *Global Change Biology* 18: 566–584.
- Sulman B, Desai A, Schroeder N, Ricciuto D, Barr A, Richardson A, Flanagan L, Lafleur P, Tian H, **Chen G**, Grant R, Poulter B, Verbeeck H, Ciais P, Ringeval B, Baker I, Schaefer K, Luo Y, Weng E. 2012. Impact of hydrological variations on modeling of peatland CO_2 fluxes: results from the North American Carbon Program site synthesis. *Journal of Geophysical Research-Biogeosciences*, doi:10.1029/2011JG001862.
- Zhu, W.Q., H. Tian, X. Xu, Y. Pan, **G. Chen**, and W. Lin. 2012. Extension of the growing season due to delayed autumn over mid and high latitudes in North America during 1982–2006. *Global Ecology and Biogeography* 21: 260–271.
- Tian, HQ, X. Xu, C. Lu, M. Liu, W. Ren, **G. Chen**, J. Melillo and J. Liu. 2011. Net exchanges of CO_2, CH_4, and N_2O between China's terrestrial ecosystems and the atmosphere and their contributions to global climate warming. *Journal of Geophysical Research* 116, G02011, doi:10.1029/2010JG001393.

- Tian, H., C. Lu, **G. Chen,** X., Xu, M., Liu, W. Ren, B. Tao, G. Sun, S. Pan, , J. Liu. 2011. Climate and land use controls over terrestrial water use efficiency in monsoon Asia. *Ecohydrology* 4: 322-340.
- Tian, H, J. Melillo, M. Liu, D. Kicklighter, J. Liu, W. Ren, C. Lu, X. Xu, **G. Chen**, C. Zhang, S. Pan, S. Running. 2011. China's terrestrial carbon balance: Contributions from multiple global change factors. *Global Biogeochemical Cycles* 25, GB1007, doi:10.1029/2010GB003838.
- Schwalm, C.R., C.A. Williams, K. Schaefer, R. Anderson, M.A. Arain, I. Baker, T.A. Black, **G. Chen**, P. Ciais, K.J. Davis, and other NACP participants. 2010. A model-data intercomparison of CO_2 exchange across North America: Results from the North American Carbon Program Site Synthesis. *Journal of Geophysical Research* 115, G00H05, doi:10.1029/2009JG001229.
- Ren W., H. Tian, B. Tao, A. Chappelka, G. Sun, C. Lu, M. Liu, **G. Chen**, X. Xu. 2011. Impacts of tropospheric ozone and climate change on net primary productivity and net carbon exchange of China's forest ecosystems. *Global Ecology and Biogeography* 20:391-406.
- Ren W., H. Tian, X. Xu, M. Liu, C. Lu, **G. Chen**, J. Mellio, J. Reilly, J. Liu. 2011. Spatial and temporal patterns of CO_2 and CH_4 fluxes in China's croplands in response to multifactor environmental changes. *Tellus B* 63: 222–240.
- Tian, H., X. Xu , M. Liu, W. Ren , C. Zhang , **G. Chen**, C. Lu 2010. Spatial and temporal patterns of CH_4 and N_2O fluxes in terrestrial ecosystems of North America during 1979–2008: application of a global biogeochemistry model. *Biogeosciences* 7: 2673-2694.
- Tian, HQ, M. Liu, C. Zhang, W. Ren, X. Xu, **G. Chen**, C. Lu and B. Tao. 2010. The dynamic land ecosystem model (DLEM) for simulating terrestrial processes and interactions in the context of multifactor global change. *Acta Geographica Sinica* 65: 1027-1047.
- Xu, X., H. Tian, C. Zhang, M. Liu, W. Ren, **G. Chen**, C. Lu, L. Bruhwiler. 2010. Attribution of spatial and temporal variations in terrestrial methane flux over North America. *Biogeosciences* 7: 3637-3655.
- Tian, H., **G. Chen**, M. Liu, C. Zhang, G. Sun, C. Lu, X. Xu, W. Ren, S. Pan and A. Chappelka. 2010. Model estimates of ecosystem net Primary productivity, evapotranspiration, and water use efficiency in the southern United States during 1895-2007. *Forest Ecology and Management* 259: 1311-1327.
- Tian, H., **G. Chen**, C. Zhang, J.M. Melillo, and C.A.S. Hall. 2010. Pattern and variation of C:N:P ratios in China's soils: a synthesis of observational data. *Biogeochemistry* 98: 139-151.
- Liu, J., D. Zeng, Z. Fan, D. Pepper, **G. Chen** and L. Zhong. 2009. Leaf traits indicate survival strategies among 42 dominant plant species in a dry, sandy habitat, China. *Frontiers of Biology in China*, 4(4): 1673-3622.
- Tian, H., X. Xu, C. Zhang, W. Ren, **G. Chen**, M. Liu, D. Lu, and S. Pan, 2008. Forecasting and Assessing the Large-scale and Long-term Impacts of Global Environmental Change on Terrestrial Ecosystems in the United States and China. In: Miao, S., S. Carstenn, and M. Nungesser, Eds. *Real World Ecology: large-scale and long-term case studies and methods*. Springer, New York.

- Liu, M., H.Q. Tian, **G. Chen**, W. Ren, C. Zhang, and J. Liu. 2008. Effects of land use and land cover change on evapotranspiration and water yield in China during 1900-2000. Journal of the American Water Resources Association (JAWRA) 44, 1193-1207.DOI: 10.1111/j.1752-1688.2008.00243.
- Hu, Y.L., D.H. Zeng, Z.P. Fan, **G. Chen**, Q. Zhao, D. Pepper. 2008. Changes in ecosystem carbon stocks following grassland afforestation of semiarid sandy soil in the southeastern Keerqin Sandy Lands, China. *Journal of Arid Environments* 72: 2193-2200.
- Yu, Z.Y., F.S. Chen, D.H. Zeng, Q. Zhao, and **G. Chen**. 2008. Soil inorganic nitrogen and microbial biomass carbon and nitrogen under pine plantations in Zhanggutai sandy soil. *Pedosphere* 18: 775-784.
- **Chen, G.** and H. Tian. 2007. Effect of land use/land cover change on the terrestrial carbon cycle. *Journal of Plant Ecology* 31(2): 189-204.
- Ren, W., Tian, H., **Chen, G.**, Liu, M., Zhang, C., Chappelka, A., Pan, S. 2007a. Influence of ozone pollution and climate variability on grassland ecosystem productivity across China. *Environmental Pollution* 149: 327-335.
- Ren, W., Tian, H., Liu, M., Zhang, C., **Chen, G.**, Pan, S., Felzer, B. and XF Xu. 2007b. Tropospheric ozone pollution and its influence on net primary productivity and carbon storage in terrestrial ecosystems of China. *Journal of Geophysical Research* 112, D22S09, doi:10.1029/2007JD008521.
- Zhang, C, Tian, H., Chappelka, A., Ren, W., H. Chen, S. Pan, M. Liu, D. Styers, **G. Chen** and Y. Wang. 2007. Impacts of climatic and atmospheric changes on carbon dynamics in the Great Smoky Mountain. *Environmental Pollution* 149: 336-347.
- Chen, F, Zeng, D, Singh, AN, **Chen, G.** 2005. Effects of soil moisture and soil depth on nitrogen mineralization process under Mongolian pine plantations in Zhanggutai sandy land, P.R. China. *Journal of Forestry Research* 16(2): 101-104.
- Zeng, D, **Chen, G**, Chen, F, Zhao, Q and Ji, X. 2005. Foliar nutrients and their resorption efficiencies in four *Pinus sylvestris* var. *mongolica* plantations of different ages on sandy soil. *SCIENTIA SILVAE SINICAE* 41(5): 21-27.
- Zeng, D and **Chen, G**. 2005. Ecological stoichiometry: A science to explore the complexity of living systems. *ACTA PHYTOECOLOGICA SINICA* 29(6): 1007-1019.
- Chen, F, Zeng, D, **Chen, G.** 2004. Influences of land use changes on spatial distribution pattern of nitrogen. *Chinese Journal of Applied Ecology* 15(6): 953-957.
- Zhao, Q, Zeng, D, Chen, F, **Chen, G**, et al. 2004. Soil Phosphorus pool and its availability in sandy *Pinus sylvestris* var. *mongolica* plantations. *Chinese Journal of Ecology* 23(5): 224-227.
- **Chen, G**, Chen, F, Zeng, D. 2004. Foliar and surface soil nutrient concentrations in *Pinus* spp. plantations in relation to species and stand age in Zhanggutai sandy land, northeast China. *Journal of Forestry Research* 15(1): 11-18.
- Chen, F, Zeng, D, **Chen, G**, et al. 2004. Effects of Reclamation on Soil Organic Carbon in the Meadow. *Chinese Journal of Soil Science* 35(4): 413-419.
- Guo, X, **Chen, G**, Liu, D, et al. 2003. Impacts of balanced fertilization on the growth and yields of bamboo shoots. *ACTA AGRICULTURAE JIANGXI* 25(1): 48-53.

- **Chen, G**., Zeng, D., Chen, F., et al. 2003. Review on the research of "islands of fertility" in the semi-arid and arid areas. *Chinese Journal of Applied Ecology* 14(12): 2295-2300.
- Chen, F, Zeng, D, **Chen, G**, et al. 2003. Comparative analysis on spatial patterns of soil moisture under different land use types in Keerqin sandy land. *Chinese Journal of Ecology* 22(6): 43-48.
- Chen, F, Zeng, D, **Chen, G**, et al. 2003. Effects of peat and weathered coal on the physiological characteristics and growth of Chinese cabbage on aeolian sandy soil. *Journal of Soil and Water Conservation* 17(2): 152-155.
- Chen, F, **Chen, G**, Zeng, D, Liang, C. 2002. The effects of peat and weathered coal on the growth of *Pinus sylvestris* var. *mongolica* seedlings on aeolian sandy soil. *Journal of Forestry Research* 13 (4): 251-254.

Book Chapters:

- Tian, H., X. Xu, C. Zhang, W. Ren, **G. Chen**, M. Liu, D. Lu and S. Pan. Understanding Large-Scale Patterns and Processes of Terrestrial Ecosystems in Changing Global Environment: the Integrated Regional Study Approach and its Applications to China and the United States. In: Miao, S.L., S. Carstenn and M. Nungesser (Eds) *Real World Ecology: Large-scale and Long-term Case Studies and Methods*. Springer-Verlag, New York Nerlin Heidelberg. 2008.
- Liu, M., H.Q. Tian, C. Zhang, **G. Chen**, W. Ren, X. Xu, S. Pan, X. Wang, and C. Nagy. 2007. Effects of urbanization and land-use change on water yield ' A case study of Haihe Basin in China. Laband, D. (eds) *Emerging Issues Along Urban/Rural Interfaces 2: Linking Land-Use Science and Society*. Conference Proceedings, Atlanta, Georgia, April 9-12, 2007
- **Chen, G.**, Tian, H., Liu, M., Ren, W., Zhang, C., Pan, S. Climate Impacts on China's Terrestrial Carbon Cycle: An Assessment with the Dynamic Land Ecosystem Model. In: Tian, H.Q. (Eds.), *Environmental Modelling and Simulation*, pp56-70, ACTA Press, Anaheim/ Calgary/ Zurich. ISBN: 0-88986-617-1. p.144. 2006.

Selected Conference Presentations:

- **Chen, G**. and D.J. Hayes. Effects of fire disturbance on direct carbon emission and ecosystem carbon balance in North America. 5th NACP meeting, Washington D.C. Jan. 26-29, 2015.
- Hayes, D., **G. Chen**, et al. Model and Inventory Perspectives on the Role of Forests in the Global Carbon Cycle: Results from the Multi-scale Synthesis and Terrestrial Model Intercomparison Project (MsTMIP). AGU Fall meeting in San Francisco. Dec. 15-19, 2014.
- **Chen, G**. and D.J. Hayes. The development and application of a harmonized burned area data set for North America to assess the effects of fire disturbance on the continental carbon budget. AGU Fall Meeting, San Francisco. Dec. 15-19, 2014.

- David A. McGuire and Model Integration Team of the Vulnerability of Permafrost Carbon Research Coordination Network. The Importance of Explicitly Representing Soil Carbon with Depth over the Permafrost Region in Earth System Models: Implications for Atmospheric Carbon Dynamics at Multiple Temporal Scales between 1960 and 2300. AGU Fall Meeting, San Francisco. Dec. 15-19, 2014.
- **Chen, G**., H. Tian, and D.J. Hayes. Effects of increasing forest plantation area and management practices on carbon storage and water balance in the United States. AGU Fall Meeting, San Francisco, CA. Dec. 9-13, 2013.
- Goswami, S., D.J. Hayes, G. Grosse, M.J. Hughes, **G. Chen**, et al. Characterizing spatial and temporal patterns of thermokarst and carbon dynamics from regional to pan-Arctic scale using remote sensing and ecosystem modeling. ORNL postdoc Symposium. July 18, 2013.
- **Chen, G**., D.J. Hayes, M.J. Hughes, S. Goswami. Estimating Disturbance Effects on Carbon Dynamics in the Southern Appalachian Region through Integrating Remote Sensing Data with an Ecosystem Model. NASA Terrestrial Ecology Science (TES) Meeting in San Diego, CA. Apr. 30-May 2, 2013.
- Goswami, S., D.J. Hayes, G. Grosse, M.J. Hughes, **G. Chen**, et al. Scaling approaches to understanding landscape change in Arctic-Boreal Regions. Terrestrial Ecosystem Model Workshop. Fairbanks, AK, June 17, 2013.
- Tian, H., **G. Chen**, X. Xu, et al. Global land-atmosphere exchanges of CH_4 and N_2O in the past three decades: magnitude, attribution and uncertainty. 9th International Carbon Dioxide Conference (ICDC), Beijing, China. June 3-7, 2013.
- **Chen, G.**, H. Tian, M. Liu, W. Zhu, X. Song, G. Lockaby, A.H. Chappelka, and J. Yang. Drought in the Southern United States over the last century: Variability and its impacts on terrestrial ecosystem productivity and carbon storage. The 95th ESA Annual Meeting, Pittsburgh, PA. August 1-6, 2010.
- Liu, M., H. Tian, **G. Chen**, J. Yang, and X. Xu. Variations of runoff and soil moisture in North America caused by climate and land use change during 1978-2008. The 95th ESA Annual Meeting, Pittsburgh, PA. August 1-6, 2010.
- **Chen, G**., H. Tian, M. Liu, C. Zhang, G. Sun, C. Lu, X. Xu, W. Ren, S. Pan, and A. Chappelka. Ecosystem Net Primary Productivity, Evapotranspiration, and Water Use Efficiency in the Southern United States. 2nd International Conference on Forests and Water in a Changing Environment. Raleigh, NC, September 14-16, 2009.
- Liu, M., H. Tian, C. Zhang, **G. Chen**, et al. Quantifying Variations of Sources and Delivery of Organic Carbon and Total Nitrogen From Continental US to GOM by Multiple Stresses by Using Integrated System of the Dynamic Land Ecosystem Model and Nutrients Export (DLEM-NE). 2nd NACP All-Investigators Meeting, San Diego, CA. Feb. 17-20, 2009.
- **Chen, G**., H. Tian, M. Liu, et al. Impacts of land use and land cover change on the fluxes of greenhouse gases in China from 1661 to 2005. AGU Fall Meeting, San Francisco, CA. Dec. 15-19, 2008.
- Lu, C. Q., H. Q. Tian, M. L. Liu, C. Zhang, W. Ren, **G. Chen**, X. F. Xu, S. Pan, D. Kicklighter, J. Melillo, Q. Mu, S. Running and M. Zhao. Effects of nitrogen

deposition on carbon sequestration in China as simulated by process-based ecosystem models. AGU Fall Meeting, San Francisco, CA. Dec. 15-19, 2008.

- Ren, W.,H.Q.Tian, M.L. Liu, **G.S. Chen**, C.Q. Lu, X.F. Xu, C. Zhang, S.F. Pan, B. Felzer, D. Kicklighter, J. Melillo, Q.Z. Mu, S. Runnning, M.S. Zhao. Comparative study of modeling the impacts of air pollution on carbon and water cycles in terrestrial ecosystems of China during 1980-2005. AGU Fall Meeting, San Francisco, CA. Dec. 15-19, 2008.
- Tian, H. J. Melillo, S. Running, J. Liu, M. Liu, Q. Mu, W. Ren, C. Lu, **G. Chen**, X. Xu, C. Zhang, S. Pan, M. Zhao, R. Myneni and X. Song. 2008. Changes in terrestrial carbon storage in China induced by multiple environmental stresses. AGU Fall Meeting, San Francisco, CA. Dec. 15-19, 2008.
- **Chen, G**., H. Tian, M. Liu, et al. Climate-induced changes in net primary productivity and carbon storage in China. 91st ESA Meeting in Memphis, TN. Aug. 6-11, 2006.