

Curriculum Vitae Guiling Wang

Professor
Department of Civil and Environmental Engineering &
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Education

Massachusetts Institute of Technology, Ph.D. in Hydroclimatology, 2000
Tsinghua University, M.S. in Hydrodynamics and Hydrology, 1995
Tsinghua University, B.E., Hydraulic Engineering, 1992

Professional Experience

2013 – Present: Professor, Department of Civil & Environmental Engineering,
and Center for Environmental Sciences and Engineering,
University of Connecticut
2016 – 2019: School of Engineering Centennial Professor, University of Connecticut
2015 – 2016: Director of Graduate Education, School of Engineering, University of
Connecticut
2009-2013: Al Geib Term Professor in Environmental Engineering Research and
Education, University of Connecticut
2009 – 2012: Director, Environmental Engineering Program, University of Connecticut
2008 – 2013: Associate Professor, Department of Civil & Environmental Engineering
and Center for Environmental Sciences and Engineering,
University of Connecticut
2003 – 2008: Assistant Professor, Department of Civil and Environmental Engineering,
and Center for Environmental Sciences and Engineering,
University of Connecticut
2001 – 2002: Assistant Research Scientist, Goddard Earth Science and
Technology Center, UMBC & Data Assimilation Office, NASA/GSFC
2000 – 2001: Research Associate, Program in Atmospheric & Oceanic Sciences
and Department of Ecology & Evolutionary Biology, Princeton University
1995 – 2000: Graduate Research Assistant, Department of Civil and
Environmental Engineering, Massachusetts Institute of Technology

Research Interests

Climate Variability, Change, and Impact; Climate Dynamics;
Earth System Modeling; Hydroclimatology; Land-Atmosphere Interactions;
Ecosystem-Climate Interactions; Coupled Hydrological-Biogeochemical Cycles.

Honors and Awards

School of Engineering Centennial Professor (2016-2019)

Al Geib Associate Professor (2009-2013) (Term Professorship for distinguished junior faculty)
Elected to the Connecticut Academy of Sciences and Engineering (CASE) in 2014

Invited Attendant, Sackler Forum on “Integrated assessment modeling and future needs of climate change research”, London, 2012 (“The Raymond and Beverly Sackler U.S.-U.K. Scientific Forum was established to help the scientific leadership of the United Kingdom and the United States forge an enduring and productive partnership on pressing topics of worldwide scientific concern with benefit to all people. These meetings are organized jointly by the National Academy of Sciences and the Royal Society, and alternate between locations in the U.S. and the U.K.” – NAS Web Page)

Connecticut Technology Council Women of Innovation 2010 finalist

Extramurally Funded Projects (Ongoing and Completed)

1. Understanding the decrease of precipitation extremes at high temperatures and its implications (PI, 2017-2020, NSF)
2. Climate adaptation and resiliency planning for protection of public drinking water (Co-I, 2016-2017, CIRCA Municipal Resilience Grant Program, with PI Christine Kirchhoff)
3. GAANN: Environmental Engineering at the forefront of water science, policy, and education (Project Director, 2015-2018, Department of Education, with Vadas, Kirchhoff, Mellor, Astitha and Anagnostou)
4. PIRE: Taming Water in Ethiopia - An Interdisciplinary Approach to Improve Human Security in a Water-Dependent Emerging Region (Key Personnel for the Water-Agriculture theme area, 2015-2020, NSF, with PIs Anagnostou, Holzer, Block, You, Hong)
5. Hydraulic redistribution of water through plant roots – implications for carbon cycling and energy flux at multiple scales (Co-PI and UConn PI, 2012-2016, DoE/Marine Biological Lab.)
6. Collaborative Research: A pilot project on interactive climate and land use predictions (Lead PI, 2011-2015, NSF EaSM)
7. Collaborative Research: Dynamic vegetation feedback and regional climate prediction in West Africa (Lead PI, 2011-2015, NSF)
8. The Ethiopian-U.S. partnership in sustainable water resources: Capacity building in research, education, and outreach (Co-I, 2010-2015, USAID & HED, with PI Gebremichael, and other Co-Is Accorsi, Atkinson-Palombo, and Osleeb)
9. Ecological impacts from the interactions of climate change, land use change and invasive species (co-PI, 2008-2012, USDA-EPA)
10. Soil moisture-vegetation-precipitation feedback over North America: the search for observational evidence (PI, 2008-2012, NOAA)
11. Understanding the dynamic land-atmosphere system: multiple climate equilibria and climate variability. (PI, 2005-2010, NSF)
12. Incorporating satellite observations of precipitation intensity into land surface modeling. (PI, 2005-2007, NASA)
13. Response of the land climate system to hydrological and radiative forcing (PI, 2004-2007, NASA/Georgia Institute of Technology)
14. Modeling the dynamic root water uptake and its impact on surface hydrological processes (PI, 2004-2007, NASA)
15. Role of soil moisture and vegetation feedback in seasonal prediction of precipitation over the Mississippi River Basin (PI, 2003-2007, NOAA)

Courses Taught

Graduate: Environmental Quantitative Methods; Hydroclimatology; Ecohydrology

Undergraduate: Engineering Hydrology; Fluid Mechanics; Environmental Debate;
Foundations of Engineering; Senior Thesis; Senior Design

Professional Services

Associate Editor (2004 – 2010), *Journal of Geophysical Research –Biogeosciences*

External Expert, International Food Policy Research Institute

Peer reviewer for over a dozen scientific journals

Proposals reviewer for NSF, NOAA, NASA, NERC (UK), IBNSF

NSF Review Panels

NOAA Review Panels

NASA Review Panels

Member, NCAR CESM Land and Societal Dimension Working Groups

Services at UConn

Director for Graduate Education, School of Engineering (2015-16)

Chair, CEE PTR Committee (2015-17)

CEE Department Head Search Committee (2014)

School of Engineering Dean Search Committee (2013)

School of Engineering Dean's PTR Council (2013-15)

Provost's Environment Committee (2009-2012)

Faculty Search Committees (2006, 2007, 3 in 2012, 2013-2014, 2017)

Atmospheric Science Group Executive Committee (2007-present)

SoE Course and Curriculum Committee (2009-2012)

SoE Graduate Committee (2009-2010, 2013-14)

Center for Geosciences Faculty Advisory Committee (2004-2007)

Chair, ENVE Graduate Admission Committee (2005-2012, 2013-15)

Departmental Course and Curriculum Committee (2009-2012)

Departmental Graduate Committee (2008-2009, 2014-2015)

Undergraduate Advising Committee (2009-2012)

Departmental Workload and Merit Committee (2007)

Faculty Advisor, Chinese Undergraduate Students Association (2004-present)

Professional Membership

American Geophysical Union

American Meteorological Society

Peer-Reviewed Publications (* indicates papers led by my students)

1. *Erfanian A, **Wang GL**, Fomenko L, Yu M, 2017: Ensemble-based Reconstructed Forcing (ERF) for regional climate modeling: Attaining performance at a fraction of cost. *Geophysical Research Letters*, in press
2. *Kim JH, Kim YJ, **Wang GL**, 2017: Impacts of Lateral Boundary Conditions on Regional Climate Projections over West Africa. *Journal of Geophysical Research – Atmospheres*, conditionally accepted

3. **Wang GL**, Wang D, Trenberth KE, Yu M, Erfanian A, Bosilovich M, Parr D, 2017: The peak structure and future changes of the relationships between extreme precipitation and temperature. *Nature Climate Change*, doi:10.1038/nclimate3239
4. **Wang GL**, Ahmed KF, You LZ, Yu M, Pal JS, Ji ZM, 2017: Projecting regional climate and cropland changes using a linked biogeophysical-socioeconomic modeling framework. Part 1: Model description and an equilibrium application. *Journal of Advances in Modeling Earth Systems*, doi:10.1002/2016MS000712
5. *Ahmed KF, **Wang GL**, You LZ, Anyah R, Zhang CR, Burnicki A, 2017: Projecting regional climate and cropland changes using a linked biogeophysical-socioeconomic modeling framework. Part 2: Transient dynamics. *Journal of Advances in Modeling Earth Systems*, doi:10.1002/2016MS000721
6. *Erfanian A, **Wang GL**, Yu M, Anyah R, 2016: Multi-model ensemble simulations of present and future climates over West Africa: impacts of vegetation Dynamics. *Journal of Advances in Modeling Earth Systems*, doi:10.1002/2016MS000660
7. Liao WL, Wang DG, Liu XP, **Wang GL**, Zhang JB, 2016: Estimated influence of urbanization on surface warming in Eastern China using time-varying land use data. *International Journal of Climatology*, DOI: 10.1002/joc.4908
8. *Saini R, **Wang GL**, Pal JS, 2016: Role of soil moisture feedback in the development of extreme summer drought and flood in the United States. *Journal of Hydrometeorology*, 17, 8, 2191-2207, DOI: 10.1175/JHM-D-15-0168.1
9. *Parr DT, **Wang GL**, Fu CS, 2016: Understanding Evapotranspiration Trends and their Driving Mechanisms over the NLDAS Domain Based on Numerical Modeling Using CLM4.5, *JGR-Atmospheres*, 121, doi: 10.1002/2015JD024398.
10. Boone, A., Y. Xue, F. De Sales, R. Comer, S. Hagos, S. Mahanama, K. Schiro, G. Song, **G. Wang** and C. R. Mechoso, 2016: The regional impact of Land-Use Land-cover Change (LULCC) over West Africa from an ensemble of global climate models under the auspices of the WAMME2 project. *Clim. Dyns.*, DOI: 10.1007/s00382-016-3252-y
11. Xue, Y, F. De Sales, W. K-M Lau, A. Boone, K.-M. Kim, C. R. Mechoso, **G. Wang**, and 23 others, 2016: West African monsoon decadal variability and drought and surface-related forcings: Second West African Monsoon Modeling and Evaluation Project Experiment (WAMME II) in the Special Issue “Decadal variability of West African monsoon, external surface forcings, and their modeling”. *Climate Dynamics*, DOI: 10.1007/s00382-016-3224-2.
12. *Fu C, **Wang GL**, Goulden ML, Scott RL, Bible K, Cardon ZG, 2016: Modeling the hydrological impact of hydraulic redistribution using CLM4.5 at nine AmeriFlux sites. *HESS*, 20, 2001-2018, doi:10.5194/hess-20-2001-2016
13. *Yu M, **Wang GL**, Chen HS, 2016: Quantifying the impacts of land surface schemes and dynamic vegetation on the model dependency of projected changes in surface energy and water budgets. *Journal of Advances in Modeling Earth Systems*, 8, 370-386, doi: 10.1002/2015MS000492
14. *Ahmed KF, **Wang GL**, You L, and Yu M, 2016: Potential impact of climate and socioeconomic changes on future agricultural land use in West Africa, *Earth System Dynamics*, 7, 151-165, doi:10.5194/esd-7-151-2016.
15. **Wang GL**, Yu M., Xue YK, 2016: Modeling the potential contribution of land cover changes to the Sahel drought using a regional climate model: Sensitivity to lateral boundary conditions and experimental approach. *Climate Dynamics*, 47, 3457-3477, DOI: 10.1007/s00382-015-2812-x
16. *Yu M, **Wang GL**, Pal JS, 2016: Impact of vegetation feedback on future climate change over West Africa. *Climate Dynamics*, 46, 3669-3688, DOI: 10.1007/s00382-015-2795-7
17. *Ji ZM, **Wang GL**, Pal JS, Yu M, 2016: Potential climate effect of mineral aerosols' over West Africa, Part I: model validation and contemporary climate evaluation. *Climate Dynamics*, 46, 1223-1239, DOI 10.1007/s00382-015-2641-y

18. *Ji ZM, **Wang GL**, Yu M, Pal JS, 2015: Potential climate effect of mineral aerosols' over West Africa, Part II: Impact of aerosols and land use on future climate. *Climate Dynamics*, DOI: 10.1007/s00382-015-2792-x
19. **Wang GL**, Miao Y, Pal JS, Rui M, Bonan GB, Levis S, Thornton PE, 2016: On the development of a coupled regional climate-vegetation model RCM-CLM-CN-DV and its validation in Tropical Africa. *Climate Dynamics*, 46, 515-539, DOI 10.1007/s00382-015-2596-z
20. *Parr DT, **Wang GL**, Bjerklie D, 2015: Integrating Remote Sensing Data on Evapotranspiration and Leaf Area Index with Hydrological Modeling: Impacts on Model Performance and Future Predictions. *Journal of Hydrometeorology*, 16, 2086-2100, DOI: 10.1175/JHM-D-15-0009.1
21. *Ahmed KF, **Wang GL**, Miao Yu, You LZ, Koo JW, 2015: Impact of climate changes on cereal crop yields in West Africa. *Climatic Change*, DOI 10.1007/s10584-015-1462-7
22. Sylla B, Pal JS, **Wang GL**, Lawrence P, 2015: Impact of land surface characterization on regional climate modeling over West Africa. *Climate Dynamics*, 54, DOI 10.1007/s00382-015-2603-4
23. *Saini R, **Wang GL**, Yu M, Kim JH, 2015: Comparison of RCMs and GCMs projections of summer precipitation in West Africa. *JGR-Atmospheres*, 120, 3679-3699, doi:10.1002/2014JD022599.
24. Wang DG, Jiang P, **Wang GL**, Wang DS, 2015: Quantitative assessment of correlation between urban extent and extreme precipitation over the Pearl River Delta, China. *Atmospheric Sciences Letters*, 120, DOI: 10.1002/asl2.559
25. Li WD, Zhang CR, Dey DK, **Wang GL**, You LZ, 2015: Bayesian Markov Chain Random Field Cosimulation for Improving Land Cover Classification Accuracy. *Mathematical Geosciences*, 47, 123-148, DOI 10.1007/s11004-014-9553-y
26. *Parr DT, **Wang GL**, Ahmed KF, 2015: Hydrological changes in the U.S. Northeast using the Connecticut River Basin as a case study: Part 2. Projections of the future. *Global and Planetary Change*, 133, 167-175
27. *Parr DT, **Wang GL**, 2014: Hydrological changes in the U.S. Northeast using the Connecticut River Basin as a case study: Part 1. Modeling and analysis of the past. *Global and Planetary Change*, 122, 208-222
28. Gu H, Yu ZB, Wang JG, **Wang GL**, Yang T, Ju Q, Yang CG, Xu F, Fan CH, 2014: Assessing CMIP5 general circulation model simulations of precipitation and temperature over China. *International Journal of Climatology*, doi: 10.1002/joc.4152
29. Gu H, Yu ZB, **Wang GL**, Wang JG, Ju Q, Yang CG, 2014: Impact of climate change on hydrological extremes in the Yangtze River Basin, China. *Stochastic Environmental Research and Risk Assessment*, 29, 693-707, doi: 10.1007/s00477-014-0957-5
30. *Yu M, **Wang GL**, Parr DT, Ahmed KF, 2014: Future changes of the terrestrial ecosystem based on a dynamic vegetation model driven with RCP8.5 climate projections from 19 GCMs, *Climatic Change*, 127, 257-271, DOI 10.1007/s10584-014-1249-2
31. *Wu D, Anagnostou EN, **Wang GL**, Moges S, 2014: Improving the surface-ground water interactions in the Community Land Model: Case study in the Blue Nile Basin. *Water Resources Research*, 50, 8015-8033, DOI: 10.1002/2013WR014501
32. Siam M, **Wang GL**, Demory M-E, Eltahir EAB, 2014: Role of the Indian Ocean sea surface temperature in shaping the natural variability in the flow of the Nile River. *Climate Dynamics*, DOI 10.1007/s00382-014-2132-6
33. *Liu D, **Wang GL**, Yu ZB, Mei R, 2014: Impact of soil moisture anomalies on climate mean and extremes in Asia. *JGR-Atmospheres*, 119, 529-545, doi: 10.1002/2013JD020890
34. *Liu D, **Wang GL**, Mei R, Yu ZB, Gu HH, 2014: Diagnosing soil moisture-atmosphere feedback at the seasonal and sub-seasonal time scales in Asia. *Journal of Hydrometeorology*, 15, 1, 320-339, DOI:10.1175/JHM-D-13-0104.1

35. *Sun SS, **Wang GL**, 2014: Climate variability attributable to terrestrial and oceanic forcing in NCAR CAM3-CLM3 models. *Climate Dynamics*, 42, 2067-2078, DOI: 10.1007/s00382-013-1913-7
36. *Yu M, **Wang GL**, 2014: Impact of bias correction of lateral boundary conditions on regional climate projections in West Africa. *Climate Dynamics*, 42, 2521-2538, DOI: 10.1007/s00382-013-1853-2
37. Zhang C, Wang D, **Wang GL**, Liu XP, 2013: Regional differences in hydrological responses to canopy interception schemes in a land surface model. *Hydrological Processes*, DOI: 10.1002/hyp.9762
38. *Mei R, **Wang GL**, Gu HH, 2013: Summer land-atmosphere coupling strength over the U.S.: Results from a regional climate model RegCM4.0-CLM3.5. *Journal of Hydrometeorology*, 14, 946-962, DOI: 10.1175/JHM-D-12-043.1
39. *Ahmed KF, **Wang GL**, Silander J, Wilson MA, Allen JM, Horton R, Anyah R, 2013: Statistical Downscaling and Bias Correction of Climate Model Outputs for Climate Change Impact Assessment in the U.S. Northeast. *Global and Planetary Changes*, 100, 320-332
40. *Kim YJ, **Wang GL**, 2012: Soil moisture-vegetation-precipitation feedback over North America: Its sensitivity to soil moisture climatology. *Journal of Geophysical Research – Atmosphere*, 117, D18115, doi:10.1029/2012JD017584
41. *Sun SS, **Wang GL**, 2012: The complexity of using a feedback parameter to quantify the soil moisture-precipitation relationship, *JGR-Atmospheres*, 117, D11113, doi:10.1029/2011JD017173.
42. *Mei R, **Wang GL**, 2012: Summer land-atmosphere coupling strength in the United States: Comparison among observations, reanalysis data and numerical models. *Journal of Hydrometeorology*, 13, 1010-1022, DOI: 10.1175/JHM-D-11-075.1
43. *Gu HH, **Wang GL**, Yu ZB, and Mei R, 2012: Assessing Future Climate Changes and Extreme Indicators in East and South Asia using the RegCM4 regional climate model. *Climatic Change*, 114, 301-317, DOI 10.1007/s10584-012-0411-y
44. **Wang GL**, Alo CC, 2012: Changes in precipitation seasonality in West Africa predicted by RegCM3 and the impact of dynamic vegetation feedback. *International Journal of Geophysics*, Special Issue on “Advances in Climate Processes, Feedbacks, Variability, and Change for the West Africa Climate System”, doi:10.1155/2012/597205
45. **Wang GL**, Sun SS, Mei R, 2011: Vegetation dynamics contributes to the multi-decadal variability of precipitation in the Amazon region, *Geophys. Res. Lett.*, 38, L19703, doi:10.1029/2011GL049017.
46. *Mei R, **Wang GL**, 2011: Observational evidence for the impact of large scale oceanic forcing and local soil moisture conditions on warm-season precipitation in the United States. *Journal of Hydrometeorology*, 12, 1086-1099, DOI: 10.1175/2011JHM1312.1
47. *Sun SS, **Wang GL**, 2011: Diagnosing the equilibrium state of a coupled global biosphere-atmosphere model. *JGR– Atmospheres*, 116, D09108, doi:10.1029/2010JD015224
48. **Wang GL**, Alo CA, Mei R, Sun SS, 2011: Droughts, hydraulic redistribution, and their impact on plant composition in the Amazon forests. *Plant Ecology*, 212, 663-673, DOI: 10.1007/s11258-010-9860-4
49. **Wang GL**, 2011: Assessing the potential hydrological impacts of hydraulic redistribution in Amazonia using a numerical modeling approach. *Water Resources Research*, 47, W02528, doi:10.1029/2010WR009601.
50. Thibeault J, Seth A, and **Wang GL**, 2011: Mechanisms of summertime precipitation variability in the Bolivian Altiplano: Present and future. *International Journal of Climatology*, 31, DOI: 10.1002/joc.2424
51. *Alo CA, **Wang GL**, 2010: Role of vegetation dynamics in regional climate predictions over western Africa. *Climate Dynamics*, 35, 907-922, DOI: 10.1007/s00383-010-0744-z

52. *Mei R, **Wang GL**, 2010: Rain follows the logging in Amazon? Interpretation of results from the CAM3-CLM3 model. *Climate Dynamics*, 34, 983-996, DOI:10.1007/s00382-009-0592-x
53. Heald CL, Wilkinson MJ, Monsoon RK, Alo CA, **Wang GL**, Guenther A, 2009: Response of isoprene emission to ambient CO2 changes and implications for global budgets. *Global Change Biology*, 15, 1127-1140
54. *Wang DG, **Wang GL**, Anagnostou EN, 2009: Impact of sub-grid variability of precipitation and canopy water storage on hydrological processes in a coupled land-atmosphere model. *Climate Dynamics*, 32, 5, 649-662, DOI 10.1007/s00382-008-0435-1
55. *Wang DG, Anagnostou EN, and **Wang GL**, 2008: Effects of sub-grid variability of precipitation and canopy water storage on climate model simulations of water cycle in Europe. *Advances in Geosciences*, 17, 49-53.
56. *Sun XM, **Wang GL**, 2008: Comparing the ability of a genetic algorithm based clustering analysis and a physically based dynamic vegetation model to predict vegetation distribution *Journal of Geophysical Research -- Biogeosciences*, 113, G03007, doi:10.1029/2007JG000655
57. *Alo C, **Wang GL**, 2008: Hydrological impact of the potential future vegetation response to climate changes projected by 8 GCMs, *Journal of Geophysical Research – Biogeosciences*, 113, G03011, doi:10.1029/2007JG000598.
58. *Alo C, **Wang GL**, 2008: Potential future changes of the terrestrial ecosystem based on climate projections by eight general circulation models, *Journal of Geophysical Research – Biogeosciences*, 113, G01004, doi:10.1029/2007JG000528.
59. *Zheng Z, **Wang GL**, 2007: Modeling the dynamic root water uptake and its hydrological impact at the Reserva Jaru site in Amazonia. *J. Geophys. Res. -- Biogeosciences*, 112, G04012, doi:10.1029/2007JG000413.
60. * Wang DG, **Wang GL**, Anagnostou EN, 2007 Validation of canopy hydrological schemes in land surface models. *Journal of Hydrology*, 347, 308-318
61. *Kim YJ, **Wang GL**, 2007: Impact of initial soil moisture anomalies on subsequent precipitation over North America. *Journal of Hydrometeorology*, 8, 3, 513-533
62. *Kim YJ, **Wang GL**, 2007: Impact of vegetation feedback on the response of precipitation to antecedent soil moisture anomalies over North America. *Journal of Hydrometeorology*, 8, 3, 534-550
63. *Wang DG, **Wang GL**, 2007: Towards a robust canopy hydrology scheme with precipitation sub-grid variability. *Journal of Hydrometeorology*, 8, 3, 439-446
64. **Wang GL**, Kim YJ, Wang DG, 2007: Quantifying the strength of soil moisture-precipitation coupling and its sensitivity to changes in surface water budget. *Journal of Hydrometeorology*, 8, 3, 551-570
65. *Wang DG, Anagnostou EN, **Wang GL**, 2006: The effect of sub-grid precipitation variability on the water balance and flux exchange processes resolved at climate scale: The European region contrasted to Africa and Amazon rainforests. *Advances in Geosciences*, 7, 269-274
66. Zeng XB, Dickinson RE, Barlage M, Dai YJ, **Wang GL**, Oleson K, 2005: Treatment of undercanopy turbulence in land models. *Journal of Climate*, 18, 5086-5094
67. **Wang GL**, 2005: Agricultural drought in a future climate: results from fifteen global climate models participating in the Inter-governmental Panel for Climate Change's 4th Assessment. *Climate Dynamics*, 25, 739-753, DOI: 10.1007/s00382-005-0057-9

68. *Wang DG, **Wang GL**, Anagnostou EN, 2005: Use of satellite-based precipitation observation in improving the parameterization of canopy hydrological processes in land surface models. *Journal of Hydrometeorology*, 6, 745-763
69. *Kim Y, **Wang GL**, 2005: Modeling seasonal vegetation variation and its validation against Moderate Resolution Imaging Spectroradiometer (MODIS) observations over North America, *JGR - Atmospheres.*, 110, D04106, doi:10.1029/2004JD005436.
70. **Wang GL**, 2004: "A conceptual modeling study on biosphere-atmosphere interactions and its implications for physically based climate modeling". *Journal of Climate*, 17 (13), 2572-2583
71. **Wang GL**, You LZ, 2004: Delayed impact of NAO on vegetation productivity in Asia. *Geophysical Research Letters*, 31, L12210, doi: 10.1029/2004GL019766
72. **Wang GL**, Eltahir EAB, Foley JA, Pollard D, Levis S, 2004: Decadal variability of rainfall in the Sahel: results from the coupled GENESIS-IBIS atmosphere-biosphere model. *Climate Dynamics*, 22(6-7), 625-637, doi: 10.1007/s00382-004-0411-3
73. **Wang GL**, Schimel DS, 2003: "Climate Change, Climate Modes, and Climate Impacts", *Annual Review for Environment and Resources* 28, 1-28
74. **Wang GL**, Jenkins GS, 2003: "Desert and Desertification", *Encyclopedia of Atmospheric Sciences*, Holton J, Pyle J, Curry J (eds.), 633-640. Academic Press, London, UK
75. Dickinson RE, **Wang GL**, Zeng XB, Zeng QC, 2003: How does the partitioning of evapotranspiration and runoff between different processes affect the variability and predictability of soil moisture and precipitation? *Advances of Atmospheric Sciences*, 20(3), 475-478
76. **Wang GL**, 2003: Reassessing the impact of North Atlantic Oscillation on the sub-Saharan vegetation productivity. *Global Change Biology*, 9(4), 493-499
77. Foley JA, Coe MT, Scheffer M, **Wang GL**, 2003: Regime Shifts in the Sahara and Sahel: Interactions between Ecological and Climatic Systems in Northern Africa. *Ecosystems*, 6, 524-539 (doi: 10.1007/s10021-002-0227-0)
78. Irizarry-Ortiz MM, **Wang GL**, Eltahir EAB, 2003: Role of the biosphere in the mid-Holocene climate of West Africa. *Journal of Geophysical Research – Atmospheres*, 108, doi: 10.1029/2001JD000989
79. **Wang GL**, Eltahir EAB, 2002: Impact of CO₂ concentration changes on the biosphere-atmosphere system in West Africa. *Global Change Biology*, 8, 1169-1182
80. **Wang GL**, Eltahir EAB, 2000a: Modeling the biosphere-atmosphere system: the impact of the sub-grid variability in rainfall interception. *Journal of Climate*, Vol.13, No.16, 2887-2899
81. **Wang GL**, Eltahir EAB, 2000b: The role of ecosystem dynamics in enhancing the low-frequency variability of the Sahel rainfall. *Water Resources Research*, Vol.36, No.4, 1013-1021
82. **Wang GL**, Eltahir EAB, 2000c: Ecosystem dynamics and the Sahel drought. *Geophysical Research Letters*, Vol.27, No.6, 795-798
83. **Wang GL**, Eltahir EAB, 2000d: Biosphere-atmosphere interactions over West Africa. Part 1: Development and validation of a coupled dynamic model. *Quarterly Journal of the Royal Meteorological Society*, Vol.126, No.565, 1239-1260.

84. **Wang GL**, Eltahir EAB, 2000d: Biosphere-atmosphere interactions over West Africa. Part 2: Multiple climate equilibria. *Quarterly Journal of the Royal Meteorological Society*, Vol.126, No.565, 1261-1280
85. **Wang GL**, Eltahir EAB, 1999: Use of ENSO information in the medium- to long-range forecasting of the Nile flood. *Journal of Climate*, Vol.12, No.6, 1726-1737
86. Eltahir EAB, **Wang GL**, 1999: Nilometers, El Nino, and climate variability. *Geophysical Research Letters*, Vol.26, No.4, 489-452
87. Yang MQ, **Wang GL**, Zhen FR, 1997: The Study on Hydro-Dynamic Model of Deposition in Sewage Stabilized Ponds. *Journal of Sediment Research*, No.4, 30-36 (China)
88. Yang MQ, **Wang GL**, 1996: Formulas for incipient motion of mud with different densities. *International Journal of Sediment Research*, Vol.11, No.1, 34-42
89. Yang MQ, **Wang GL**, 1995: The incipient motion for cohesive fine sediments. *Journal of Basic Science and Engineering*, Vol.3, No.1, 99-109 (China)