

Curriculum Vitae Guiling Wang

Professor of Environmental Engineering
Department of Civil and Environmental Engineering &
Institute of the Environment
University of Connecticut
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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, UConn
2016 – 2022: School of Engineering Centennial Term Professor, UConn
2015 – 2016: Director of Graduate Education, School of Engineering, UConn
2009 – 2011: 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, UConn
2003 – 2008: Assistant Professor, Department of Civil and Environmental Engineering,
and Center for Environmental Sciences and Engineering, UConn
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

Hydroclimatology; Hydrometeorology; Water Cycle and Hydrological Extremes;
Land-Atmosphere Interactions; Ecosystem-Climate Interactions;
Regional and Global Climate System Modeling; Artificial Intelligence for Earth Systems;
Climate Variability, Change, and Impact (on water, ecosystems, agriculture)

Honors and Awards

Elected Fellow, American Association for the Advancement of Science (class of 2023)
UConn C. R. Klewin Excellence in Teaching Award (2023)
Elected Fellow, American Meteorological Society (class of 2022)
UConn School of Engineering Centennial Professor (2016-2022)
Connecticut Technology Council Women of Innovation 2010 finalist
UConn Al Geib Associate Professor (2009-2013)
Elected member, Connecticut Academy of Sciences and Engineering (CASE, 2014)

Courses Taught

Graduate: Environmental Quantitative Methods; Hydroclimatology; Ecohydrology

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

Professional Services

Editor, *Geophysical Research Letters* (2023 – present)

Associate Editor, *Geophysical Research Letters* (2020 – 2022)

Associate Editor, *Journal of Hydrometeorology* (2019 – Present)

American Meteorological Society *Committee on Hydrology* (2019 – Present)

Chapter author, *the Fifth National Climate Assessment* (2021-2023)

American Geophysical Union *Hydrological Science Award Committee* (2021-2023)

Program Chair, 37th Conference on Hydrology (2022-2023)

Program Co-Chair, 35th and 36th Conference on Hydrology (2019-2022)

The AMS *Francis W. Reichelderfer Award Selection Committee* (2020)

Editorial Board Member, *Scientific Reports* (2018 – 2020)

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

Peer reviewer for over a dozen scientific journals

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

NSF Review Panels (2006, 2010, 2012, 2019)

NOAA Review Panels (2010, 2011)

NASA Review Panels (2013, 2021)

Department of Energy Review Panels (2019, 2020, 2022, 2023, 2024)

External Advisor for *McKinsey & Company* (2020-2024)

Services at UConn

Member, College of Engineering Dean's PTR Council (2013-15, 2023-2025)

Member, CEE Department Faculty Search Committee (2022-23)

Member/Chair, NRE/CEE Faculty Search Committees (2006, 2007, 3 in 2012, 2013, 2017, 2023)

Member, Office of Sustainability Director Search Committee (2022)

Chair, CEE PTR Committee (2015-17, 2019-21)

Member, CEE PTR Committee (2008-2012, 2017-2018, 2021-2023)

Member, CEE Departmental C & C Committee (2009-2012; 2021-23)

Member, Vice Provost for Faculty/Staff Affairs Search Committee (2020)

Member, OVPR Internal Competitions Advisory Board (2020-2021)

Member, Solve Climate by 2030 (2019-2020)

Member, UConn Reads Selection Committee (2019-2020)

Member, NRE Faculty Search Committee (2019-20)

Chair, Department Head Advisory Board (2018-19, 2020-2021)

Chair, CEE Department Head Search Committee (2018)

Member, Department Head Advisory Board (2015-16; 2017-18)

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

Member, CEE Department Head Search Committee (2014)

School of Engineering Dean Search Committee (2013)

Director, Environmental Engineering Program (2009-2012)

Provost's Environment Committee (2009-2012)

Atmospheric Science Group Executive Committee (2007-present)

School of Engineering Course and Curriculum Committee (2009-2012)

School of Engineering Graduate Committee (2009-2010, 2013-14)

Center for Geosciences Faculty Advisory Committee (2004-2007)

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

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)

Advising

Current Graduate Advisees:

Faisal Alvee (PhD student, since 2022)
Badhan Makduma (PhD student, since 2021)
Yan Chen (PhD student in Geography; co-advised with Dr. Anji Seth; since 2020)
Koushan Mohammadi (PhD student, since 2019)
Javad Teymoori (PhD student, since spring 2023)
Yara Medawar (PhD student, since fall 2023)

Postdoctoral Scholars Supervised and Current Placement:

Hongchen Qin (2024 – Present)
Xiaoming Sun (2017 – 2019, Staff Scientist, Los Alamos National Lab)
Ying Shi (2016 – 2017, Research Scientist, China National Climate Center)
Congsheng Fu (2013 – 2015, Professor, National Institute of Geography and Limnology)
Roop Saini (2012-2014, independent consultant)
Miao Yu (2011-2014, Professor, Nanjing Univ. of Information Science and Technology)
Zhenming Ji (2013-2014, Associate Professor, Sun Yat-Sen University)

Ph.D. Students Graduated and Current Placement:

Yelin Jiang (Ph.D., 2022: postdoc, Columbia University)
Meijian Yang (Ph.D., 2021: postdoc, Columbia University)
Amir Erfanian (Ph.D., 2018; Data Scientist, McKinsey & Company)
Kazi Ahmed (Ph.D. 2016; Research Scientist, AIR Worldwide | Verisk)
Dana Parr (Ph.D. 2016; Instructor, Taft School)
Shanshan Sun (Ph.D. 2012; Assistant Professor, Yunnan University)
Rui Mei (Ph.D. 2012; Research Analyst, Intercontinental Exchange)
Clement Alo (Ph.D. 2008; Associate Professor, Montclair State University)
Dagang Wang (Ph.D. 2007; Professor, Sun Yat-Sen University)
Yeonjoo Kim (Ph.D. 2006; Professor, Yonsei University)

M.S. students graduated:

Tengyu Ding (2020, non-thesis), Brandon Holland (2019, non-thesis)
Lori Fomenko (2019), Aaron Rosenberg (2014), Zhitong Fei (2014, non-thesis),
Joseph Albani (2014), Jeehee Kim (2013), Di Wu (2013), Farzan Ahmed (2011),
Rui Mei (2008), David Hoover (2008), Xiaoming Sun (2007), Jeff Zhe Zheng (2006)

Visiting Students/scholars Supervised:

Weiguang Liu (2018-2019), Alexander Zhang (summer, 2017-2018),
Ying Shi (2016-2017), Dagang Wang (summer 2016, summer 2017),
Di Liu (2011-12), Huanghe Gu (2010-11), Bing Gao (2009-10),

Publications I: Peer Reviewed Book Chapters and Technical Reports

1. **Wang G**, Dickinson RE, 2024: Land-Atmosphere Interactions Overview, *Encyclopedia of Atmospheric Sciences*, 3rd Edition
2. Thornton, P.E., B.C. Reed, G.Z. Xian, L. Chini, A.E. East, J.L. Field, C.M. Hoover, B. Poulter, S.C. Reed, **G. Wang**, and Z. Zhu, 2023: Ch. 6. Land cover and land-use change. In: *Fifth National Climate Assessment*. Crimmins, A.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, B.C. Stewart, and T.K. Maycock, Eds. U.S. Global Change Research Program, Washington, DC, USA. <https://doi.org/10.7930/NCA5.2023.CH6>

3. Seth A (co-lead), **Wang G** (co-lead), Kirchhoff C et al., 2019: *The Connecticut Physical Climate Science Assessment Report*. CIRCA Technical Report, <https://circa.uconn.edu/ct-climate-science/>
4. **Wang G**, Jenkins GS, 2003: “Desert and Desertification”, *Encyclopedia of Atmospheric Sciences*, Holton J, Pyle J, Curry J (eds.), 633-640. Academic Press, London, UK

Publications II: Journal Articles (* papers led by students/postdocs/visiting scholars and papers for which Dr. Wang is the corresponding author)

1. Hu H, Leung LR, **Wang G**, Sun X, 2024: The Scaling of MCS and non-MCS with temperature over the Central U.S. (in review).
2. *Mohammadi K, **Wang G**, 2024: Impact Matters: Detection and Earth Warning of Agriculturally Impactful Flash Drought. (in review)
3. *Jiang Y, **Wang G**, 2024: Soil moisture feedback dominates the role of land in the development of compound drought-heat extremes in Tropical South America. *Journal of Hydrometeorology*, <https://doi.org/10.1175/JHM-D-24-0005.1>
4. *Chen Y, **Wang G**, Seth A, 2024: Climatic drivers for the variation of gross primary productivity across ecosystems in the United States. *JGR-Biogeosciences*, *JGR-Biogeosciences*, 129, e2024JG008168. <https://doi.org/10.1029/2024JG008168>
5. Wang GY, Fu R, Zhuang Y, Dirmeyer PA, Santanello J, **Wang G**, Yang K, McColl K, 2023: Influence of Lower Tropospheric Moisture on Local Soil Moisture-Precipitation Feedback over the U.S. Southern Great Plains, *Atmospheric Chemistry and Physics*, 24, 3857-3868, <https://doi.org/10.5194/acp-24-3857-2024>
6. Tang J, Xue Y, Long M, ..., **Wang G**, ..., Pan X. (20 co-authors), 2023: Regional Climate Model Intercomparison over the Tibetan Plateau in the GEWEX/LS4P Phase I. *Climate Dynamics*, <https://doi.org/10.1007/s00382-023-06992-4>
7. *Jiang Y, **Wang G**, 2023: A new approach to soil initialization for studying subseasonal land-atmosphere interactions. *Journal of Advances in Modeling the Earth Systems*, 15, e2023MS003822. <https://doi.org/10.1029/2023MS003822>
8. *Fu C, **Wang G**, Yang Y, et al., 2023: Temperature thresholds for carbon flux variation and warming-induced changes. *Journal of Geophysical Research: Atmospheres*, 128, e2023JD039747. <https://doi.org/10.1029/2023JD039747>
9. *Yang M, **Wang G**, 2023: Heat stress to jeopardize crop production in the US Corn Belt based on downscaled CMIP5 projections. *Agricultural Systems*, 211, <https://doi.org/10.1016/j.agsy.2023.103746>
10. *Yang M, **Wang G**, Sun Y, You L, Anyah R, 2023: Water stress dominates the projected maize yield changes in Ethiopia, *Global and Planetary Changes*, 228, 104216, <https://doi.org/10.1016/j.gloplacha.2023.104216>
11. *Yang M, **Wang G**, Wu S et al, 2023: Seasonal prediction of crop yields in Ethiopia using an analog approach. *Agricultural and Forest Meteorology*, 331, 109347, <https://doi.org/10.1016/j.agrformet.2023.109347>
12. *Liu Q, Dou F, Yang M, Amdework E, **Wang G**, Bi J, 2023: Customized Positional Encoding to Combine Static and Time-varying Data in Robust Representation Learning for Crop Yield Prediction. IJCAI International Joint Conference on Artificial Intelligence.
13. *Liu Q, Yang M, Mohammadi K, Song D, Bi J, **Wang G**, 2022: Machine learning crop yield models based on meteorological features and comparison with a process-based model, *Artificial Intelligence for Earth Systems*, 1 (4), e220002, <https://doi.org/10.1175/AIES-D-22-0002.1>
14. *Mohammadi K, Jiang Y, **Wang G**, 2022: Flash drought early warning based on the trajectory of solar-induced chlorophyll fluorescence. *PNAS*, 119, e2202767119, <https://doi.org/10.1073/pnas.2202767119>

15. *Sun X, **Wang G**, 2022: Causes for the negative scaling of extreme precipitation at high temperatures. *Journal of Climate*, 34, 6119-6134, <https://doi.org/10.1175/JCLI-D-22-0142.1>
16. **Wang G**, Sun X, 2022: Monotonic increase of extreme precipitation intensity with temperature when controlled for saturation deficit. *Geophysical Research Letters*, 49, e2022GL097881, <https://doi.org/10.1029/2022GL097881>
17. *Erfanian A, Jiang Y, Fomenko L, Fu R, Seth A, & **Wang G**, 2022: Variability, trend, and extremes of the South American vegetation-climate system: Results from a coupled regional model. *Journal of Geophysical Research: Atmospheres*, 127, e2021JD035691. <https://doi.org/10.1029/2021JD035691>
18. *Jiang Y, Yang M, Liu W, Mohammadi K, **Wang G**, 2022: Eco-hydrological responses to recent droughts in tropical South America. *Environmental Research Letters*, 17, 024037, <https://doi.org/10.1088/1748-9326/ac507a>
19. Long K, Wang D, **Wang G**, Zhu J, Wang S, 2021: High temperature enhances spatio-temporal rainfall concentration. *Journal of Hydrometeorology*, 22, 3159-3169, <https://doi.org/10.1175/JHM-D-21-0034.1>
20. Lin Y, Wang D, **Wang G**, et al., 2021: A hybrid deep learning algorithm and its application to streamflow prediction. *Journal of Hydrology*, 601, 126636, <https://doi.org/10.1016/j.jhydrol.2021.126636>
21. Xue YK et al., 2021: Impact of Initialized Land Surface Temperature and Snowpack on Subseasonal to Seasonal Prediction Project (LS4P), Phase I: Organization and Experimental design, *Geosci. Model Dev.*, 14, 4465–4494, <https://doi.org/10.5194/gmd-14-4465-2021>
22. Lala J, Yang M, **Wang G**, & Block P (2021). Utilizing rainy season onset predictions to enhance maize yields in Ethiopia. *Environmental Research Letters*. 16, 054035, <https://doi.org/10.1088/1748-9326/abf9c9>
23. *Jiang YL, **Wang G**, Liu WG, Erfanian A, Deng Q, Fu R, 2021: Modeled response of South American climate to three decades of deforestation. *Journal of Climate*, 34, 6, 2189–2203, <https://doi.org/10.1175/JCLI-D-20-0380.1>
24. Mehboob MS., Kim Y, Lee J, Um M-J, Erfanian A, **Wang G**, 2020: Projection of vegetation impacts on future droughts over West Africa using a coupled RegCM-CLM-CN-DV. *Climatic Change*, doi: 10.1007/s10584-020-02879-z
25. Shi Y, **Wang G**, 2020: Changes in building climate zones over China based on high-resolution regional climate projections. *Environmental Research Letters*, <https://iopscience.iop.org/article/10.1088/1748-9326/abbde8>
26. **Wang G**, Kirchoff C, Seth A, Abatzoglou J, Livneh B, Pierce DW, Fomenko L, Ding T, 2020: Projected changes of precipitation characteristics depend on downscaling method and the training data: LOCA vs. MACA using the U.S. Northeast as an example. *Journal of Hydrometeorology*, 21, 2739–2758, <https://doi.org/10.1175/JHM-D-19-0275.1>
27. *Mullin CA, Kirchoff CJ, **Wang G**, Vlahos P, 2020: Future projections of water temperature and thermal stratification in Connecticut reservoirs and possible implications for cyanobacteria. *Water Resources Research*, <https://doi.org/10.1029/2020WR027185>
28. *Yang MJ, **Wang G**, et al., 2020: Impact of planting time soil moisture on cereal crop yield in the Upper Blue Nile Basin: A novel insight towards agricultural water management. *Agricultural Water Management*, doi:10.1016/j.agwat.2020.106430
29. *Liu WG, **Wang G**, Yu M, et al., 2020: Projecting the future vegetation-climate system over East Asia and its RCP-dependence. *Climate Dynamics*, 55, 2725-2742, DOI 10.1007/s00382-020-05411-2
30. *Liu WG, **Wang G**, Yu M, et al., 2020: Multi-model future projections of the regional vegetation-climate system over Asia: Comparison between two ensemble approaches, *JGR-Atmospheres*, 125, e2019JD031967. doi:10.1029/2019JD031967

31. *Yang MJ, **Wang G**, Ahmed KF, et al., 2020: The role of climate in the trend and variability of Ethiopia's cereal crop yields. *Science of the Total Environment*, 723, 137893
32. Kirchhoff, C. J., and Co-authors, 2019: Climate assessment for local action. *Bulletin of the American Meteorological Society*, <https://doi.org/10.1175/BAMS-D-18-0138.1>
33. Zhou WC et al., 2019: Towards water-saving irrigation methodology: Field test of soil moisture profiling using flat thin mm-sized soil moisture sensors (MSMSs). *Sensors & Actuators: B. Chemical*, 298, 126857, doi: 10.1016/j.snb.2019.126857
34. Liao WL, Wang DG, **Wang G**, Xia YL, Liu XP, 2019: Quality control and evaluation of the observed daily data in North American soil moisture database. *Journal of Meteorological Research*, doi: 10.1007/s13351-019-8121-2.
35. Zhang Z, Wang DG, **Wang G**, Qiu J, Liao W, 2019: Use of SMAP soil moisture and fitting methods in improving GPM estimation in near real time. *Remote Sensing*, 11(3), 368; [doi:10.3390/rs11030368](https://doi.org/10.3390/rs11030368)
36. *Erfanian A, **Wang G**, 2018: Explicitly accounting for the role of remote oceans in regional climate modeling of South America. *Journal of Advances in Modeling Earth Systems*, doi:10.1029/2018MS001444
37. *Shi Y, Yu M, Erfanian A, **Wang G**, 2018: Modeling the dynamic vegetation-climate system over China using a synchronously coupled regional model. *Journal of Climate*, doi: 10.1175/jclim-d-17-0191.1
38. *Shi Y, **Wang G**, Gao XJ, Xu Y, 2018: Effects of climate and potential policy changes on heating degree days in current heating areas of China. *Scientific Reports*, 8, 10211, DOI:10.1038/s41598-018-28411-z
39. Fu C, Lee X, Griffis TJ, **Wang G**, Wei Z, 2018: Influences of root hydraulic redistribution on N₂O emissions at AmeriFlux sites. *Geophysical Research Letters*, 45, doi:10.1029/2018GL077789
40. *Fu C, **Wang G**, Bible K, Goulden ML, Saleska SR, Scott RL, Cardon ZG, 2018: Hydraulic redistribution affects modeled carbon cycling via soil microbial activity and suppressed fire. *Global Change Biology*, 24, 3472-3485, doi: 10.1111/gcb.14164
41. *Shi Y, **Wang G**, Gao XJ, 2018: Role of resolution in regional climate change projections over China. *Climate Dynamics*, 51, 2375–2396, doi:10.1007/s00382-017-4018-x
42. *Wang DG, **Wang G**, Parr D, Liao WL, Xia YL, Fu CS, 2017: Incorporating remote sensing-based ET estimates into the Community Land Model version 4.5. *Hydrology and Earth System Sciences*, 21, 3557-3577, doi:10.5194/hess-21-1-2017
43. Koster RD et al., 2017: Hydroclimatic variability and predictability: A Survey of recent research. *Hydrology and Earth System Sciences*, 21, 3777–3798, doi:10.5194/hess-21-3777-2017
44. *Erfanian A, **Wang G**, Fomenko L, 2017: Unprecedented drought over tropical South America in 2016: significantly under-predicted by tropical SST. *Scientific Reports*, doi:10.1038/s41598-017-05373-2
45. *Kim JH, Kim YJ, **Wang G**, 2017: Impacts of boundary condition changes on regional climate projections over West Africa, *Journal of Geophysical Research - Atmospheres*, 122, doi:10.1002/2016JD026167
46. Xu ZH et al., Flat thin mm-sized soil moisture sensor (MSMS) fabricated by gold compact discs etching for real-time in situ profiling. *Sensors and Actuators B: Chemical*, doi: 10.1016/j.snb.2017.05.154
47. *Erfanian A, **Wang G**, Fomenko L, Yu M, 2017: Ensemble-based Reconstructed Forcing (ERF) for regional climate modeling: Attaining the performance at a fraction of cost. *Geophysical Research Letters*, 44, doi:10.1002/2017GL073053
48. **Wang G**, 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*, 7, 268-274, doi:10.1038/nclimate3239

49. **Wang G**, 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
50. *Ahmed KF, **Wang G**, 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
51. *Erfanian A, **Wang G**, 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
52. Liao WL, Wang DG, Liu XP, **Wang G**, 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
53. *Saini R, **Wang G**, 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
54. *Parr DT, **Wang G**, 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.
55. 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
56. 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.
57. *Fu C, **Wang G**, Goulden ML, Scott RL, Bible K, Cardon ZG, 2016: Modeling the hydrological impact of hydraulic redistribution using CLM4.5 at eight AmeriFlux sites. *HESS*, 20, 2001-2018, doi:10.5194/hess-20-2001-2016
58. *Yu M, **Wang G**, 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
59. *Ahmed KF, **Wang G**, 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.
60. **Wang G**, 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
61. *Yu M, **Wang G**, 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
62. *Ji ZM, **Wang G**, 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
63. *Ji ZM, **Wang G**, 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

64. **Wang G**, 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
65. *Parr DT, **Wang G**, 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
66. *Ahmed KF, **Wang G**, Miao Yu, You LZ, Koo JW, 2015: Potential impact of climate changes on cereal crop yields in West Africa. *Climatic Change*, 133, 321-334, DOI 10.1007/s10584-015-1462-7
67. Sylla B, Pal JS, **Wang G**, 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
68. *Saini R, **Wang G**, 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.
69. Wang DG, Jiang P, **Wang G**, 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
70. Li WD, Zhang CR, Dey DK, **Wang G**, 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
71. *Parr DT, **Wang G**, 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
72. *Parr DT, **Wang G**, 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
73. Gu H, Yu ZB, Wang JG, **Wang G**, 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
74. Gu H, Yu ZB, **Wang G**, 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
75. *Yu M, **Wang G**, 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
76. *Wu D, Anagnostou EN, **Wang G**, 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
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