CURRICULUM VITAE

ZHUO WANG

A. Educational Background

Degree	Field of Study	Institution	Date
B.S.	Atmospheric Sciences	Nanjing University, Nanjing, China	1997
M.S.	Meteorology	University of Hawaii at Manoa	2000
Ph.D.	Meteorology	University of Hawaii at Manoa	2004

B. List of Academic Positions

National Research Council postdoctoral fellow, Department of Meteorology, Naval Postgraduate School, 2005-2008

Research Assistant Professor, Department of Meteorology, Naval Postgraduate School, 2008-2009

Assistant Professor, Department of Atmospheric Sciences, University of Illinois at Urbana-Champaign, 2009-2015

Associate Professor, Department of Atmospheric Sciences, University of Illinois at Urbana-Champaign, 2015-2019

Professor, Department of Atmospheric Sciences, University of Illinois at Urbana-Champaign, 2019-present

C. Honors, Recognitions, and Prizes

Travel award, the CRCES-IPRC Workshop on Decadal Climate Variability, Waikoloa, Hawaii, 2004

Papers of Note: "Tropical-Extratropical teleconnection via a southerly conveyor", *Bulletin of the American Meteorological Society*, Jan 2006

Dean's Teaching Fellow, University of Illinois, College of Liberal Arts and Sciences, 2010

List of Teachers Ranked as Excellent for the following semesters: Spring 2014, Fall 2016, Spring 2017

Papers of Note: "What is the Key Feature of Convection Leading Up to Tropical Cyclone Formation"? *Bulletin of the American Meteorological Society*, June 2018

Richard and Margaret Romano Professorial Scholar, University of Illinois at Urbana-Champaign, 2020

D. Offices Held in Professional Societies

World Meteorology Organization (WMO) Working Group on Tropical Cyclone Formation, WMO Seventh International Workshop on Tropical Cyclones (IWTC-VII), 2010

Lead Scientist for the field experiment "Pre-Depression Investigation of Cloud Systems in the Tropics", sponsored by the National Science Foundation, September 2010.

American Meteorological Society Committee on Tropical Meteorology and Tropical Cyclones, 2013-2019

World Meteorology Organization (WMO) Working Group on Tropical Cyclogenesis, WMO Eighth International Workshop on Tropical Cyclones (IWTC-VIII), 2014

Scientific Advisory Board, Developmental Testbed Center, National Center for Atmospheric Research (NCAR), 2016-2019

Chair, American Meteorological Society Committee on Tropical Meteorology and Tropical Cyclones, 2017-2019

Member at-large, the American Meteorological Society Publications Commission, 2018-2022

World Meteorology Organization (WMO) Working Group on Tropical Cyclogenesis Research, WMO Ninth International Workshop on Tropical Cyclones (IWTC-9), 2018

World Meteorology Organization (WMO) Working Group on Subseasonal Prediction of Tropical Cyclones, WMO Ninth International Workshop on Tropical Cyclones (IWTC-9), 2018

Conference Chair, the 33rd American Meteorological Society Conference on Hurricanes and Tropical Meteorology, 2018

US Climate Variability and Predictability (CLIVAR) Program, Predictability, Predictions, and Applications Interface (PPAI) Panel, member, 2018-2021

Co-Chair, National Weather Service Unified Forecast System Strategic Implementation Plan, Working Group on Verification and Validation, 2018-2020

Co-Chair, US Climate Variability and Predictability (CLIVAR) Program, Predictability, Predictions, and Applications Interface (PPAI) Panel, Jan 2019-Dec 2020

Scientific Steering Committee, US Climate Variability and Predictability (CLIVAR) Program, Jan 2019-Dec 2020

Co-Chair, Working Group on Tropical Meteorology Research (TMR), the World Weather Research Programme (WWRP), World Meteorological Organization (WMO), 2019-present

International Scientific Committee, International Workshop on Monsoons-VII, 2020-2022

International Organising Committee, International Workshop on Monsoons-VII/Training Workshop, 2021

International Organising Committee, International Workshop on Tropical Cyclones-X, 2021-2022

Co-Chair, WCRP Lighthouse Activity - Explaining and predicting Earth system change, Group 3: Assessment of current and future hazards, 2021-present

E. Editorships of Journals and Other Learned Publications

Associate Editor, Monthly Weather Review, 2014

Editor, Journal of Meteorological Research, 2017 – 2020

Editor, Journal of Atmospheric Sciences, 2017 - present

Member, American Meteorological Society Publications Commission, 2018-present

F. Publications and Creative Works

#	Denotes any publication derived from a candidate's thesis
*	Denotes any publication that has undergone stringent editorial review by peers
+	Denotes any publication that was invited and carries special prestige and recognition
Underline	Denotes student under candidate supervision

Chapters in Books

1. *Von Storch, J., B. Wang, and **Z. Wang**, 2001: The ENSO spectrum: A result of deterministic chaos or stochastic forcing? In Dynamics of Atmospheric General Circulation and Climate, Ed. IAP/Academia, China Meteor. Press, pp. 579-600.
2. *Chang, C.-P., **Z. Wang** and H. Hendon, 2006: The Asian winter monsoon, Chapter 3 in The Asian monsoon. Ed. B. Wang. Praxis Publishing, 89-128.
3. *+**Wang, Z**., 2014: Tropical cyclogenesis. In Encyclopedia of Atmospheric Sciences, 2nd Edition. Ed. North, G.R., J. Pyle, and F. Zhang, Academic Press.

4. *+**Wang, Z.**, 2014: Tropical meteorology. In Encyclopedia of Natural Resources. Ed. Y.Q. Wang, CRC Press.

Articles in Journals

5. *Chang, C.-P., **Z. Wang**, J. Ju, and T. Li, 2004: On the relationship between western Maritime Continent monsoon rainfall and ENSO during northern winter. J. Climate, 17, 665-672.
6. *Chang, C.-P., **Z. Wang**, J. McBride, and C. H. Liu, 2005: Annual cycle of Southeast Asia-Maritime Continent rainfall and the asymmetric monsoon transition. J. Climate, 18, 287-301.
7. *#+**Wang, Z**., C.-P. Chang, B. Wang and F.-F. Jin, 2005: Teleconnections from Tropics to northern extratropics through a southerly conveyor. J. Atmos. Sci., 62, 4057–4070.
8. #+**Wang, Z**., C.-P. Chang, B. Wang and F.-F. Jin, 2006: Papers of Note: Tropical-Extratropical teleconnection via a southerly conveyor. Bulletin of the Amer. Meteor. Soc., Jan 2006, 18-19.
9. *#**Wang, Z**., C.-P. Chang, and B. Wang, 2007: Impacts of El Nino and La Nina on the U.S. Climate during Northern Summer. J. Climate, 20, 2165–2177.
10. ***Wang, Z**., and C.P. Chang, 2008: Mechanism of the Asymmetric Monsoon Transition as Simulated in an AGCM. J. Climate, 21, 1829–1836.
11. ***Wang, Z.**, M. T. Montgomery, and T. J. Dunkerton, 2009: A dynamically-based method for forecasting tropical cyclogenesis location in the Atlantic sector using global model products, Geophys. Res. Lett., 36, L03801, doi:10.1029/2008GL035586.
12. *Dunkerton, T. J., Montgomery, M. T., and **Wang, Z.**, 2009: Tropical cyclogenesis in a tropical wave critical layer: easterly waves, Atmos. Chem. Phys., 9, 5587-5646.
13. ***Wang, Z.** and R. Elsberry, 2010: Modulation of the African Easterly Jet by a Mesoscale Convective System. Atmos. Sci. Lett, doi:10.1002/asl.262.
14. *Montgomery, M. T., Lussier III, L. L., Moore, R. W., and **Wang, Z.**, 2010: The genesis of Typhoon Nuri as observed during the Tropical Cyclone Structure 2008 (TCS-08) field experiment – Part 1: The role of the easterly wave critical layer, Atmos. Chem. Phys., 10, 9879-9900.
15. *Montgomery, M. T., **Wang, Z.**, and Dunkerton, T. J., 2010: Coarse, intermediate and high-resolution numerical simulations of the transition of a tropical wave critical layer to a tropical storm, Atmos. Chem. Phys., 10, 10803-10827.
16. ***Wang, Z.**, M. T. Montgomery, and T. J. Dunkerton, 2010: Genesis of Pre-hurricane Felix (2007). Part I: The Role of the Wave Critical Layer. J. Atmos. Sci., 67, 1711-1729.
17. ***Wang, Z.**, M. T. Montgomery, and T. J. Dunkerton, 2010: Genesis of Pre-hurricane Felix (2007). Part II: Warm core formation, precipitation evolution and predictability. J. Atmos. Sci., 67, 1730-1744.
18. ***Wang, Z.**, T. J. Dunkerton, and M. T. Montgomery, 2012: Application of the Marsupial Paradigm to Tropical Cyclone Formation from Northwestward Propagating Disturbances. Mon. Wea. Rev., 140, 66-76.
19. ***Wang, Z.**, M. T. Montgomery, and C. L. Fritz, 2012: A first look at the structure of the wave pouch during the 2009 PREDICT-GRIP "dry run" over the Atlantic. Mon. Wea. Rev., 140, 1144-1163.
20. *Montgomery, M. T., C. Davis, T. Dunkerton, **Z. Wang**, C. Velden, R. Torn, S. Majumdar, F. Zhang, R. Smith, L. Bosart, M. Bell, J. Haase, A. Heymsfield, M. Boothe, 2012: The Pre-Depression Investigation of Cloud Systems in the Tropics (PREDICT) Experiment: Scientific Basis, New Analysis Tools and Some First Results. Bull. Amer. Meteorol. Soc., 93, 153-172.
21. ***Wang, Z.** and C.-P. Chang, 2012: A Numerical Study of the Interaction between the Large-scale Monsoon Circulation and Orographic Precipitation over South and Southeast Asia. J. Climate, 25, 2440-2455.

22. ***Wang, Z.**, 2012: Thermodynamic Aspects of Tropical Cyclone Formation. J. Atmos. Sci., 69, 2433-2451.
23. *Zhang, G., and **Z. Wang**, 2013: Interannual Variability of the Atlantic Hadley Circulation in Boreal Summer and Its Impacts on Tropical Cyclone Activity. J. Climate, 26, 8529-8544.
24. *Fritz, C. L., and **Z. Wang**, 2013: A Numerical Study of the Impacts of Dry Air on Tropical Cyclone Formation: A Development Case and a Nondevelopment Case. J. Atmos. Sci., 70, 91-111.
25. ***Wang, Z.**, 2014: Characteristics of Convective Processes and Vertical Vorticity from the Tropical Wave to Tropical Cyclone Stage in a High-Resolution Numerical Model Simulation of Tropical Cyclone Fay (2008). J. Atmos. Sci., 71, 896-915.
26. ***Wang, Z**, 2014: Role of Cumulus Congestus in Tropical Cyclone Formation in a High-resolution Numerical Model Simulation. J. Atmos. Sci., 71, 1681-1700.
27. ***Wang, Z**., and I. Hankes, 2014: Characteristics of Tropical Easterly Wave Pouches during Tropical Cyclone Formation. Mon. Wea. Rev., 142, 626-633.
28. *Li, W., **Z. Wang**, M. Peng, and J. A. Ridout, 2014: Evaluation of Tropical Intraseasonal Variability and Moist Processes in the NOGAPS Analysis and Short-term Forecasts. Wea. Forecasting, 29, 975-995.
29. *Hankes, I., **Z. Wang**, G. Zhang, C. L. Fritz, 2014: Merger of African Easterly Waves and Formation of Cape Verde Storms. Q.J.R. Meteorol. Soc., doi: 10.1002/qj.2439.
30. *Fritz, C. L., and **Z. Wang**, 2014: Water Vapor Budget in a Developing Tropical Cyclone and Its Implication to Tropical Cyclone Formation. J. Atmos. Sci., 71, 4321-4332.
31. ***Wang, Z**., G. Zhang, M. S. Peng, J.-H. Chen, and S.-J. Lin, 2015: Predictability of Atlantic tropical cyclones in the GFDL HiRAM model, Geophys. Res. Lett., 42, doi:10.1002/2015GL063587.
32. *Zhang, G., and **Z. Wang**, 2015: Interannual variability of tropical cyclone activity and regional Hadley circulation over the Northeastern Pacific, Geophys. Res. Lett., 42, doi:10.1002/2015GL063318.
33. *Wu, L., H. Su, R.G. Fovell, R. G., T.J. Dunkerton, **Z. Wang**, and B.H. Kahn, 2015: Impact of environmental moisture on tropical cyclone intensification, Atmos. Chem. Phys., 15, 14041-14053, doi:10.5194/acp-15-14041-2015.
34. ***Wang, Z**., and I. Hankes, 2016: Moisture and Precipitation Evolution during Tropical Cyclone Formation as Revealed by the SSMI/SSMIS Retrievals. J. Atmos. Sci., 73, 2773-278.
35. *Li, W., **Z. Wang** and M. Peng, 2016: Evaluating Tropical Cyclone Forecasts in the NCEP Global Ensemble Forecasting System (GEFS) Reforecast Version-2, Wea. Forecasting, 31, 895-916.
36. *Zhang, G., **Z. Wang**, T. Dunkerton, M. Peng, and G. Magnusdottir, 2016: Extratropical Impacts on Atlantic Tropical Cyclone Activity, J. Atmos. Sci., 73, 1401–1418.
37. *Fritz, C., **Z. Wang**, S. W. Nesbitt and T. Dunkerton, 2016: Vertical Structure and Contribution of Different Types of Precipitation during Atlantic Tropical Cyclone Formation as Revealed by TRMM PR, Geophys. Res. Lett., 43, 894–901, doi:10.1002/2015GL067122.
38. *Zhang, G., **Z. Wang**, M. Peng, and G. Magnusdottir, 2017: Characteristics and Impacts of Extratropical Rossby Wave Breaking during the Atlantic Hurricane Season, J. Clim., 30, 2363-2379.
39. *Hu, H., F. Dominguez, **Z. Wang**, D. A. Lavers, F. M. Ralph and G. Zhang, 2017: Linking Atmospheric River Hydrological Impacts on the U.S. West Coast to Rossby Wave Breaking, J. Clim., 30, 3381-3399.
40. *+**Wang, Z**., 2018: What is the Key Feature of Convection Leading Up to Tropical Cyclone Formation? J. Atmos. Sci., 75, 1609–1629.

41. ***Wang, Z.**, W. Li, M. S. Peng, X, Jiang, R. McTaggart-Cowan, and C. Davis, 2018: Predictive Skill and Predictability of North Atlantic Tropical Cyclogenesis in Different Synoptic Flow Regimes, J. Atmos. Sci., 75, 361-378.
42. +**Wang, Z.**, 2018: Papers of Note: What is the Key Feature of Convection Leading Up to Tropical Cyclone Formation? Bulletin of the Amer. Meteor. Soc., Jun 2018, 1120-1121.
43. *Zhang, G., and **Z. Wang**, 2018: North Atlantic Extratropical Rossby Wave Breaking during the Warm Season: Wave Life Cycle and Role of Diabatic Heating, Mon. Wea. Rev., 146, 695-712.
44. *Jiang, X., B. Xiang, M. Zhao, T. Li, S.-J. Lin, and **Z. Wang**, 2018: Predictability of Cyclogenesis in a Global High-Resolution Coupled Model System, J. Clim., 31, 6209–6227.
45. *Chang, C.-C., and **Z. Wang**, 2018: Relative Impacts of Local and Remote Forcing on Tropical Cyclone Activity in Numerical Model Simulations, Geophys. Res. Lett., 45. doi.org/10.1029 /2018GL078606.
46. *Li, W., **Z. Wang**, G. Zhang, M. Peng, S. Benjamin, and M. Zhao, 2018: Subseasonal Variability of Rossby Wave Breaking and Impacts on Tropical Cyclones during the North Atlantic Warm Season, J. Clim., J. Clim., 31, 9679–9695.
47. *Miller, D.E. and Z. Wang, 2019: Assessing Seasonal Predictability Sources and Windows of High Predictability in the Climate Forecast System, Version 2. J. Clim., 32,1307–1326.
48. *Zhang, G*., and **Z. Wang**, 2019: North Atlantic Rossby Wave Breaking during the Warm Season: Reconciliation of Tropical and Extratropical Impacts on Atlantic Hurricane Activity, J. Clim., 32, 3777-3801.
49. *Camargo, S.J., J. Camp, R.L. Elsberry, P.A. Gregory, P.J. Klotzbach, C.J. Schreck, A.H. Sobel, M.J. Ventrice, F. Vitart, **Z. Wang**, M.C. Wheeler, M. Yamaguchi, and R. Zhan, 2019: Tropical cyclone prediction on subseasonal time-scales. Tropical Cyclone Research and Review, 8(3), 150-165.118
50. *Miller, D. E., and **Z. Wang**, 2019: Skillful seasonal prediction of Eurasian winter blocking and extreme temperature frequency. Geophysical Research Letters, 46, 11,530–11,538. https://doi.org/ 10.1029/2019GL085035
51. *Apurv, T., Xu, Y.-P., **Wang, Z.**, & Cai, X., 2019: Multidecadal changes in meteorological drought severity and their drivers in mainland China. Journal of Geophysical Research: Atmospheres, 124, 12,937–12,952.
52. ***Wang, Z.**, J. Walsh, S. Szymborski, and M. Peng, 2020: Rapid Arctic Sea Ice Loss on the Synoptic Time Scale and Related Atmospheric Circulation Anomalies, J. Clim., J. Climate, 33, 1597–1617.
53. *Chang, C. and **Z. Wang**, 2020: Multi-Year Hybrid Prediction of Atlantic Tropical Cyclone Activity and the Predictability Sources. J. Climate, 33, 2263–2279.
54. *Miller, D.E., and **Z. Wang**, Robert J. Trapp, Daniel S. Harnos, 2020: Hybrid Prediction of Weekly Tornado Activity out to Week 3: Utilizing Weather Regimes. Geophys. Res. Lett. 47. https://doi.org/10.1029/2020GL087253.
55. *Tang, B., J. Fang, A. Bentley, G. Kilroy, M. Nakano, M-S Parke, V.P.M. Rajasree, **Z. Wang**, A. Wing, L. Wu , 2020: Recent Advances in Research on Tropical Cyclogenesis, Tropical Cyclone Research and Review, 9, 87-105.
56. +***Wang, Z.**, G. Zhang, T. Dunkerton, and F. Jin, 2020: Summertime Stationary Waves Integrate Tropical and Extratropical Impacts on Tropical Cyclone Activity, Proceedings, National Academy of Sciences, 202010547; DOI: 10.1073/pnas.2010547117.
57. *Yan, Z., Ge, X., **Z. Wang**, Wu, C., and Peng, M. 2021: Understanding the Impacts of an Upper-Tropospheric Cold Low on Typhoon Jongdari (2018) Using Piecewise Potential Vorticity Inversion, Monthly Weather Review, 149, 1499-1515.

58. *Zhou, W., K. Guan, B. Peng, Z. Wang, R. Fu, B. Li, E. A. Ainsworth, E. DeLucia, L. Zhao, and Z. Chen, 2021: A generic risk assessment framework to evaluate historical and future climate-induced risk for rainfed corn and soybean yield in the U.S. Midwest. Weather and Climate Extremes, 33.
59. *Miller, D. E., Z. Wang, and B. Li, D. S. Harnos, and T. Ford, 2021: Skillful Subseasonal Prediction of United States Extreme Warm Days and Standardized Precipitation Index in Boreal Summer. J. Climate, 34, 5887-5898.
60. Zhang. G., H. Murakami, W. F. Cooke, **Z. Wang**, L. Jia, F. Lu, X. Yang, T. L. Delworth, A. T. Wittenberg, M. J. Harrison, M. Bushuk, C. McHugh, N. C. Johnson, S. B. Kapnick, K.-C. Tseng and L. Zhang, 2021: Seasonal predictability of baroclinic wave activity. npj Clim Atmos Sci 4, 50.
61. *Miller, D. E and **Z. Wang**, 2022: Northern Hemisphere Winter Blocking: Differing Onset Mechanisms across Regions, J. Atmos. Sci., 79, 1291-1309.
62. *Datt, I., S. J. Camargo, A. H. Sobel, R. McTaggart-Cowan, and **Z. Wang**, 2022: An Investigation of Tropical Cyclone Development Pathways as an Indicator of Extratropical Transition. J. of the Meteorological Society of Japan. 2022–37.
63. *Chang, C.-C., **Z. Wang**, J. Walsh, and P. J. Stoll, 2022: Modulation of North Atlantic Polar Low Activity and Associated Flow Patterns by Sudden Stratospheric Warmings, J. Climate, 35, 4013-4026.
64. Boyd, K., **Z. Wang**, and J. E. Walsh, 2022: A Genesis Potential Index for Polar Lows, J. Climate, 35, 4291-4302.
65. *Chang, C., **Z. Wang**, M. Ting, and M. Zhao, 2023: Summertime Subtropical Stationary Waves in the Northern Hemisphere: Variability, Forcing Mechanisms, and Impacts on Tropical Cyclone Activity, J. Climate, 36, 753-773.