

Curriculum Vitae: Bin Wang (May 2020)

Department of Atmospheric Sciences and International Pacific Research Center, School of Ocean and Earth Science and Technology, University of Hawaii at Manoa.

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Degree and Appointments

- M. S. (1981), Meteorology, University of Science and Technology of China, Beijing.
- Ph. D. (1984), Geophysical Fluid Dynamics (GFD), Florida State University
- 11/84 -12/86: Postdoctoral, GFD Program, Princeton University.
- 01/87, 07/89, 07/92-: Assistant, Associate and Full Professor, Atmospheric Sciences, UH.
- 07/2010-01/2014: Chair, Department of Atmospheric Sciences, University of Hawaii.
- 01/99-: Co-Leader, Monsoon Team, International Pacific Research Center.
- 01/88-: Senior Fellow, Joint Institute for Marine and Atmospheric Research.
- Chair Professor, Department of Atmospheric Sciences, National Taiwan University, 2015-2018
Director, Earth System Modeling Center, Nanjing University of Information Science and Technology, 2013-; Co-director of LASG/Institute of Atmospheric Physics, Chinese Academy of Science, 2001-2010; Guest Prof., Peking University, 2008-11; Chair Professor, Ocean University of China, 2005-09.
- Visiting Professor: Nagoya University, Japan 2004; University of Tokyo, 2001; City University of Hong Kong, 2000, National Taiwan University 2001, Seoul National University 2001; Max-Planck Institute for Meteorology, Hamburg, 1994.

Awards

- 2015 Received the Carl-Gustaf Rossby Research Medal, the highest award from American Meteorological Society, “for creative insights leading to important advances in the understanding of tropical and monsoonal processes and their predictability”.
- 2015 Received the “You bring charm to the world as most influential Chinese 2014-2015” Award.
- Elected a *Fellow, American Geophysical Union*, 2013
- Received the University of Hawaii “Board of Regent’s Medal for Excellence in Research”, 2013.
- Received the “Scientist of the Year” Award 2011-2012 ARCS (Achievement Awards for College Scientists) foundation, Honolulu Chapter.
- Elected a *Fellow, American Meteorological Society*, 2009

Keynotes/distinguished Lectures

- Plenary talk at National Laboratory of Marine Science and Technology, Annual symposium. Qingdao, China, January 12-14, 2018.
- Keynote, IODP-PAGES Workshop on Global Monsoon in Long-term Records, Shanghai, China, 7-9 September 2017
- Distinguished Lecture, 13th Annual meeting Asia-Oceania Geoscience Society (AOGS), July 31-Aug 5 2016, Beijing.
- Keynote, Third Earth System Science Conference (ESSC), July 4-6, 2016 Shanghai, China.
- Keynote Lecture, 2016 Taiwan Geoscience Assembly, May 16-20, 2016, Taipei, Taiwan.
- Distinguished Lecture in Korean National Academy of Science, 39th International Symposium, Oct 19th 2012, Seoul Republic of Korea.
- Keynote Speech at First International Conference on Policy & Research for Global Disaster Management, National Emergency Management Agency, Korea. Nov 11-13 2009. Seoul.
- Keynote Lecture at Conference on Teleconnection in the Atmosphere and Ocean, 17 - 20 November 2008, International Center for Theoretical Physics (ICTP) Trieste, Italy.

- Keynote Speech at 3d Alexander von Humboldt International Conference on East Asian Summer Monsoon: Past, present and future, 27-31 August 2007, Beijing.
- Keynote speech on International Conference on "Celebrating the Monsoon", June 24-27 2007, Bangalore, India.
- Keynote Lecture at Workshop on Seasonal Climate Prediction August 7-18 2006, International Center for Theoretical Physics, Trieste, Italy.
- Deliver a Keynote at WMO/Winter MONEX: A Quarter Century and Beyond, April 4-7 2006, Kuala Lumpur.
- Deliver a Keynote Lecture at ICTP Workshop on Tropical Convection and MJO, March 14-18 2006, Trieste, Italy.

Research highlight

- *Area of expertise*: General Fields: Climate Dynamics, Dynamic Meteorology, Tropical Meteorology, and Geophysical Fluid Dynamics. Specific areas: Global Monsoons, Tropical Intraseasonal Oscillation, El Nino-Southern Oscillation (ENSO), Climate Variability, Predictability and Prediction, Climate Changes, Tropical Cyclones, Atmosphere-Ocean Interaction, Atmospheric Waves and Instability.
- *Refereed publications*: Authored and co-authored more than 420 peer-reviewed papers (first-author paper: 94) on the subjects of *Climate Dynamics, Atmospheric and Ocean Dynamics, Tropical Meteorology*.
- *Citation (Google Scholar)*: The total number of citations: Over 44,000. Citation number in 2019: ~4,900. h-index:111.
- Books and book chapters: Edited two books and authors of 20 book chapters. "The Asian Monsoon", 2006, Ed. B. Wang, Springer/Praxis Publishing Co., New York, pp787. Hoskins, B., and B. Wang, 2006: Large scale dynamics, in "The Asian Monsoon", Ed. B. Wang, Springer/Praxis Publishing. New York, pp 357-415. Wang, B.: Theory, Chapter 10 in Tropical Intraseasonal Oscillation in the Atmosphere and Ocean. Eds. William K.-M. Lau and D. E. Waliser. Praxis Publishing. Second addition, 2011.
- Advisor to 24 PhDs and 10 MS graduates in Atmospheric Sciences.
- Mentor to more than 25 Postdoctoral fellows/visiting scientists since 2000.
- Research Grants: Since 2000 total amount of PI grants is about 10 million.

International/National Committees

- 2016-present, member, International Science Advisory Panel, Centre for Climate Research Singapore (CSRS). Singapore.
- 2015-present, member, Science Review Panel, UK-China CSSP.
- 2012-2017, Co-Chair, Science Advisory Committee, Asian Pacific Economic Cooperation (APEC) Climate Center.
- 2010-2015, Chair, Advisory Board, Research Center for Environmental Changes (RCEC), Academia Sinica. Taiwan.
- 2010-2014, Chair and member, Advisory Board, Research Center for Environmental Changes (RCEC), Academia Sinica. Taiwan.
- 2007-Present, Co-Chair, Science Steering Committee, WCRP/CLIVAR-GEWEX Asian Monsoon Years (2007-2012).
- 2007-Present, Co-Chair, Advisory Committee, WMO/WWRP/TMR Monsoon Panel's Expert Team on Climate Impacts on Monsoon Weather.
- 2007-Present, Co-Chair, IGBP/PAGES Working Group on Global Monsoon and Low Latitude Dynamics.
- 2005-Present, Co-Chair (05-09) and member (09-), WCRP/ CLIVAR Asian-Australian Monsoon Panel (AAMP).

- 2008-2010, National Research Council (NRC), Member, Committee on Assessment of Intraseasonal to Interannual Climate Prediction and Predictability.
- Member of Science Advisory/Steering Committees: WCRP/CLIVAR (04-08), WCRP-WWRP/YOTC (07-09), Center for Ocean-Land-Atmosphere Science (06-), College of Global Change and Earth System Science, Beijing Normal University (11-), National Climate Center of China (06-). National Key Lab for Atmos. Science and Geophysical Fluid Dynamics, Chinese Academy of Sciences (01-), AMS/Committee on Interaction of the Sea and Atmosphere (00-05).

Editorial Affiliations

- 2005-2009: Editor, *Journal of Atmospheric Sciences*, American Meteorological Society.
- 2008-2011: Editor, *Asian-Pacific J. of Atmos. Sci.*.
- 2001-Present: Associated Editor, *Advances in Atmospheric Sciences*.
- 2001-Present: Advisory board, World Scientific Pub. Book Series on East Asian Meteorology.

SELECTED PUBLICATIONS (1985-Present)

(The number in the parenthesis indicates citation number by May 20202 from Google Scholar)

1. **Wang, B.,** A. Barcilon, and L. N. Howard, 1985: **Linear dynamics of transient planetary waves in the presence of damping.** *J. Atmos. Sci.*, 42, 1893-1910. [Full paper.](#)
Obtained an approximate analytical solution for the Charney baroclinic instability model and showed that the maximum growth rate of the planetary-scale Green mode is one third of that of the most unstable synoptic-scale Charney mode.
2. **Wang, B.,** and A. Barcilon, 1986: **The Weakly nonlinear dynamics of a planetary Green mode and atmospheric vacillation.** *J. Atmos. Sci.*, 43, 1275-1287. [Full paper.](#)
3. **Wang, B.,** and A. Barcilon, 1986: **Two dynamic regimes of finite amplitude Charney and Green waves.** *J. Atmos. Sci.*, 43, 1288-1296. [Full paper.](#)
4. **Wang, B.,** and A. Barcilon, 1986: **Moist stability of a baroclinic zonal flow with conditionally unstable stratification.** *J. Atmos. Sci.*, 43, 705-719. [Full paper.](#)
The work extends classic Eady baroclinic model to include interactive convective heating and reveals the moist baroclinic instability can be three time stronger than dry baroclinic instability, explaining the explosive cyclonegenesis.
5. **Wang, B.,** 1987: **The nature of CISK in a generalized continuous model.** *J. Atmos. Sci.*, 44, 1411-1426. [Full paper.](#)
6. **Wang, B.,** 1987: **Another look at CISK in polar oceanic air masses.** *Tellus*, 39A, 179-186. [Full paper.](#)
7. **Wang, B.,** 1987: **The development mechanism for Tibetan Plateau warm vortices.** *J. Atmos. Sci.*, 44, 2978-2994. [Full paper.](#)
8. **Wang, B.,** and I. Orlanski, 1987: **Study of a heavy rain vortex formed over the eastern flank of the Tibetan Plateau.** *Mon. Wea. Rev.*, 115, 1370-1393. [Full paper.](#)
- *9. **Wang, B.,** 1988: **Dynamics of tropical low frequency waves: An analysis of the moist Kelvin wave.** *J. Atmos. Sci.*, 45, 2051-2065. [Full paper.](#) (313)
The theoretical model, for the first time, elucidated the role of Boundary layer moisture convergence in selecting preferred planetary scale of intraseasonal Oscillation.
10. **Wang, B.,** 1988: **Comments on "An air-sea interaction model of intraseasonal oscillation in the tropics".** *J. Atmos. Sci.*, 45, 3521-3525. [Full paper.](#)
11. **Wang, B.,** and J.-K. Chen, 1989: **On the zonal-scale selection and vertical structure of equatorial intraseasonal waves.** *Quart. J. Roy. Meteor. Soc.*, 115, 1301-1323. [Full paper.](#)
- *12. Rui. H., and **B. Wang,** 1990: **Development characteristics and dynamic structure of tropical intraseasonal convection anomalies.** *J. Atmos. Sci.*, 47, 357-379. [Full paper.](#) (377)

Revealed, for the first time, 3-D circulation structures of the MJO convective anomalies and circulation systems

- *13. Wang, B., and H. Rui, 1990: **Dynamics of the coupled moist Kelvin-Rossby wave on an equatorial beta-plane.** *J. Atmos. Sci.*, 47, 397-413. [Full paper. \(294\)](#)
Advanced one of the earliest theories of MJO, the *frictionally coupled moist Kelvin-Rossby wave theory*, to explain essential dynamics of the MJO. Addressed why MJO possesses a coupled Kelvin-Rossby wave structure, how these two types of waves can couple together through joint boundary layer moisture convergence and convection, and why the coupled wave packet selects slow eastward movement and has a planetary zonal circulation scale.
- *14. Wang, B., and H. Rui, 1990: **Synoptic climatology of transient tropical intraseasonal convection anomalies: 1975-1985.** *Meteor. Atmos. Phys.*, 44(1-4), 43-61. [Full paper. \(552\)](#)
Revealed, for the first time, season-dependent 2-dimensional propagation pathway of tropical intraseasonal convective anomalies.
15. Wang, B., 1990: **On the asymmetry of baroclinic instability between easterly and westerly shear.** *Tellus*, 42A, 463-468. [Full paper.](#)
16. Wang, B., and X. Li, 1992: **The beta drift of three-dimensional vortices: A numerical study.** *Mon. Wea. Rev.*, 120, 579-593. [Full paper.](#)
17. Wang, B., and Y. Xue, 1992: **Behavior of a moist Kelvin wave packet with nonlinear heating.** *J. Atmos. Sci.*, 49, 549-559. [Full paper.](#)
18. Wang, B., 1992: **The vertical structure and development of the ENSO anomaly mode during 1979-1989.** *J. Atmos. Sci.*, 49, 698-712. [Full paper. \(105\)](#)
19. Zhu, B. and B. Wang, 1993: **The 30-60-day convection seesaw between the tropical Indian and western Pacific Oceans.** *J. Atmos. Sci.*, 50, 184-199. [Full paper. \(104\)](#)
20. Wang, B. and T. Li, 1993: **A simple tropical atmosphere model of relevance to short-term climate variations.** *J. Atmos. Sci.*, 50, 260-284. [Full paper.](#)
21. Wang, B., 1994: **Climatic regimes of tropical convection and rainfall.** *J. Climate*, 7, 1109-1118. [Full paper. \(120\)](#)
A pioneering work proposed the hydrometeorological definition of monsoon based on the contrasting rainy summer and dry winter of the monsoon characteristics. This new definition extends the monsoon domains from the eastern hemisphere to the western hemisphere and from land to ocean.
- *22. Wang, B. and Li. T., 1994: **Convective interaction with boundary-layer dynamics in the development of a tropical intraseasonal system.** *J. Atmos. Sci.*, 51, 1386-1400. [Full paper. \(200\)](#)
23. Wang, B., 1994: **On the annual cycle in the tropical eastern-central Pacific.** *J. Climate*, 7, 1926-1942. [Full paper.](#)
24. Wang, B., 1995: **Interdecadal changes in El Niño onset in the last four decades.** *J. Climate*, 8, 267-258. [Full paper. \(705\)](#)
Discovered the interdecadal changes in the ENSO onset in the late 1970s and attributed these changes to the shift in the Pacific mean state.
25. Wang, B., 1995: **Transition from a cold to a warm state of the El Niño-Southern Oscillation Cycle.** *Meteor. Atmos. Phys.*, 56, 17-32. [Full paper.](#)
26. Wang, B., and X. Li, 1995: **Propagation of a tropical cyclone in a meridionally varying zonal flow: An energetics analysis.** *J. Atmos. Sci.*, 52, 1421-1433. [Full paper.](#)
27. B. Wang., T. Li, and P. Chang, 1995: **An intermediate model of the tropical Pacific Ocean.** *J. Phys. Oceanogr.*, 25, 1599-1616. [Full paper.](#)
- *28. Wang, B., and X. Xie, 1996: **Low-Frequency equatorial waves in vertically sheared zonal flow. Part I: Stable waves.** *J. Atmos. Sci.*, 53, 449-467. [Full paper. \(257\)](#)
Established a theory on vertical wind shear impacts on equatorial waves. The theory reveals that (a) westerly (easterly) vertical shear can trap equatorial Rossby waves to the upper (lower) troposphere; (b) vertical wind shear enables emanation of barotropic Rossby waves from the equator into extratropics;

and (c) an easterly vertical shear can dramatically change the horizontal structure of the moist equatorial Rossby waves. The theory shed lights on equatorial-extratropical teleconnection, the wave energy accumulation in the equatorial westerly duct, and the mechanisms of the northward propagation of ISO convection due to the effects of monsoonal vertical wind shear.

29. Xie, X. and B. Wang, 1996: **Low-frequency equatorial waves in vertically sheared zonal flow. Part II: unstable waves.** *J. Atmos. Sci.*, 53, 3589-3605. [Full paper \(120\)](#)

The theory extends Matsuno's (1966) theory to elucidate background flow and heating effects on equatorial waves. The theory explains why an equatorial symmetric forcing can produces equatorially asymmetric atmospheric response.

- *30. Wang, B., and Y. Wang, 1996: **Temporal structure of the Southern Oscillation as revealed by waveform and wavelet analysis.** *J. Climate*, 9, 1586-1598. [Full paper. \(288\)](#)
31. Wang, B. and Z. Fang, 1996: **Chaotic Oscillations of tropical climate: A dynamic system theory for ENSO.** *J. Atmos. Sci.*, 53, 2786-2802. [Full paper. \(136\)](#)
- *32. Wang, B. and X. Xie, 1997: **A model for the boreal summer Intraseasonal Oscillation.** *J. Atmos. Sci.*, 54, 72-86. [Full paper. \(385\)](#)
- Established the first theory for Boreal Summer Intraseasonal Oscillation (BSISO) that explains the origin of the break-active monsoon cycles. The theory highlights how the monsoon vertical wind shear and moist static energy distribution control ISO propagation and variance as well as sustain the active-break monsoon cycles.
- *33. Wang, B., and X. Xu, 1997: **Northern Hemisphere summer monsoon singularities and climatological intraseasonal oscillation.** *J. Climate*, 10, 1071-1085. [Full paper. \(260\)](#)
34. Wang, B., X. Li, and L. Wu, 1997: **Direction of hurricane beta drift in horizontally sheared flows.** *J. Atmos. Sci.*, 54, 1462-1471. [Full paper.](#)
35. Wang, B., and R. Wu, 1997: **Peculiar temporal structure of the South China Sea summer monsoon.** *Adv. Atmos. Sci.*, 14, 177-194. [Full paper.](#)
- *36. Wang, B., and X. Xie, 1998: **Coupled Modes of the Warm Pool Climate System Part I: The Role of Air-Sea Interaction in Maintaining Madden-Julian Oscillation.** *J. Climate*, 11, 2116-2135. [Full paper. \(231\)](#)

Advanced a theory to elaborate the coupled instability of the warm pool climate system.

Demonstrated that the warm pool ocean-atmosphere interaction is conducive to intraseasonal, unstable coupled atmosphere-ocean modes through positive wind-evaporation/entrainment and cloud-radiation feedbacks. The theory explains observed features of the co-variability of MJO and ocean mixed layer variability that is confirmed by GCM experiments.

37. Wang, B., A. Barcilon, and Z. Fang, 1999: **Stochastic Dynamics of El Nino-Southern Oscillation.** *J. Atmos. Sci.*, 56, 5-20. [Full paper \(116\)](#)
38. Wang, B., R. Wu, and R. Lukas, 1999: **Roles of the western North Pacific wind variation in thermocline adjustment and ENSO phase transition.** *J. Meteor. Soc. Japan*, 77, 1-16. [Full paper. \(136\)](#)
39. Wang, B., and Y. Wang, 1999: **Dynamics of the ITCZ-Equatorial Cold Tongue Complex and Causes of the Latitudinal Climate Asymmetry.** *J. Climate*, 12, 1830-1847. [Full paper.](#)
- *40. Wang, B., and Z. Fan, 1999: **Choice of South Asian Summer Monsoon Indices.** *Bull. Amer. Meteor. Sci.*, 80, 629-638. Abstract. [Full paper. \(744\)](#)
- First suggested the notion that Asian monsoon is driven by two relatively independent heat sources over the Bay of Bengal and the Philippine Sea, respectively.
41. Wang, B., R. Wu, and R. Lukas, 2000: **Annual adjustment of the thermocline in the tropical Pacific Ocean.** *J. Climate*, 13, 596-616. [Full paper.](#)
- *42. Wang, B., R. Wu, and X. Fu, 2000: **Pacific-East Asia teleconnection: How does ENSO affect East Asian climate?** *J. Climate*, 13, 1517-1536. [Full paper. \(2054\)](#)

Advanced an atmosphere-ocean interaction theory to explain El Niño-Southern Oscillation (ENSO)-East Asian Monsoon teleconnection. The theory elucidates how the positive thermodynamic feedback between moist atmospheric Rossby waves and underlying SST anomaly extends ENSO's impacts to upstream midlatitude during ENSO decaying phase, affecting East Asian monsoon.

43. Wang, B., and Z. Fang, 2000: **Impacts of shortwave radiation forcing on ENSO: A study with a coupled tropical ocean-atmosphere model.** *Climate Dyn.* 16, 677-691. [Full paper.](#)
- *44 Wang, B., R. Wu, K.-M. Lau, 2001: **Interannual variability of the Asian summer monsoon: Contrasts between the Indian and the western North Pacific-East Asian monsoons.** *J. Climate*, 14, 4073-4090. [Full paper. \(871\)](#)
Elaborated distinct climatology and interannual variations of the South Asian and East Asian summer monsoons
45. Wang, B. and X. Fu, 2001: **Processes determining the rapid reestablishment of the equatorial Pacific cold tongue/ITCZ complex.** *J. Climate*, 14, 2250-2265. [Full paper.](#)
- *46. Kemball-Cook, S., and B. Wang, 2001: **Equatorial waves and air-sea interaction in the boreal summer intraseasonal oscillation.** *J. Climate*, 14, 2923-2942. [Full paper. \(360\)](#)
47. Wang, B. and S.-I. An, 2001: **Why the properties of El Niño changed during the late 1970s?** , *Geophys. Res. Lett.*, 28, 3709-3712. [Full paper. \(172\)](#)
Established the interdecadal changes in ENSO periodicity and spatial structure and explained the underlying mechanisms.
- *48. Wang, B. and LinHo, 2002: **Rainy season of the Asian-Pacific monsoon.** *J. Climate*, 15, 386-398. [Full paper. \(921\)](#)
A pioneering work that delineates the characteristics and linkage of the entire Asian monsoon rainy season.
- *49. Wang, B., and J. C. L. Chan, 2002: **How strong ENSO events affect tropical storm activity over the Western North Pacific.** *J. Climate*, 15, 1643-1658. [Full paper. \(825\)](#)
Elucidated the mechanism by which ENSO affect tropical storm activity in the WNP, which offers a physical basis for seasonal prediction of tropical storms.
- *50. Wang, B., and Q. Zhang, 2002: **Pacific-East Asian teleconnection. part II: How the Philippine Sea anomalous anticyclone is established during El Niño development.** *J. Climate*, 15, 3252-3265. [Full paper. \(374\)](#)
51. Wang, B., and S.-I. An, 2002: **A mechanism for decadal changes of ENSO behavior: Roles of background wind changes.** *Climate Dyn.*, 18, 475-486. [Full paper. \(163\)](#)
- *52. Wang, B., R. Wu, and T. Li, 2003: **Atmosphere-Warm Ocean interaction and its impacts on Asian-Australian Monsoon variation.** *J. Climate*, 16, 1195-1211. [Full paper. \(586\)](#)
Disclosed that the positive monsoon-warm ocean feedback and the annual variations of the monsoon mean states are two critical factors that control the interannual variability of the Asian-Australian monsoon system besides ENSO.
- *53. Li, T., B. Wang, C.-P. Chang, and Y. Zhang, 2003: **A theory for the Indian Ocean dipole-zonal mode.** *J. Atmos. Sci.*, 60, 2119-2135. [Full paper. \(302\)](#)
- *54. Wang, B., S. C. Clemons, and P. Liu, 2003: **Contrasting the Indian and East Asian monsoons: implications on geologic timescales.** *Marine Geology*, 201, 5-21. [Full paper. \(254\)](#)
- *55. Wang, B., I.-S. Kang, and J.-Y. Lee, 2004: **Ensemble Simulations of Asian-Australian Monsoon Variability by 11 AGCMs.** *J. Climate*, 17, 803-818. [Full paper. \(374\)](#)
Discovered that treating monsoon as a slave to SST forcing results in the failure of the atmospheric general circulation models (AGCMs) in reproducing summer monsoon rainfall, pointing to a strategic weakness of the AMIP (Atmospheric Model Intercomparison Project), and the two-tier approach (predict monsoon anomalies with AGCM forced by predicted SST) for monsoon prediction
- *56. Wang, B., LinHo, Yongsheng Zhang, and M.-M. Lu, 2004: **Definition of South China Sea Monsoon Onset and Commencement of the East Asia Summer Monsoon.** *J. Climate*, 17, 699-710. [Full paper. \(304\)](#)

- *57. Wang, B., Q. Ding, X. Fu, I.-S. Kang, K. Jin, J. Shukla, and F. Doblas-Reyes, 2005: **Fundamental challenge in simulation and prediction of summer monsoon rainfall.** *Geophys. Res. Lett.*, Vol. 32, No. 15, L15711, doi: 10.1029/2005GL022734 12. [Full paper. \(566\)](#)
 With observed data and multi-model seasonal hindcast experiments, this work demonstrates the necessity for using coupled model for summer monsoon prediction, shifting the paradigm of the boundary-forced predictability” to “coupled monsoon-ocean predictability”.
58. Wang, B., P. J. Webster, H. Teng, 2005: **Antecedents and self-induction of active-break south Asian monsoon unraveled by satellites.** *Geophys. Res. Lett.*, 32, L04704. [Full paper.](#)
- *59. Ding, Qinghua and Bin Wang, 2005: **Circumglobal teleconnection in the Northern Hemisphere Summer.** *J. Climate*, 18, 3483-3505. [Full paper. \(625\)](#)
 Discovered the *boreal summer Circum-Global Teleconnection*, which is the counterpart of the winter Pacific-North America teleconnection. This finding lays a foundation for northern summer extratropical seasonal and intraseasonal predictions.
60. Wang, B., and S.-I. An 2005: **A method for detecting season-dependent modes of climate variability: S-EOF analysis.** *Geophys. Res. Lett.*, Vol. 32, L15710. [Full paper.](#)
- *61. Wang, B., and Q. Ding, 2006: **Changes in global monsoon precipitation over the past 56 years.** *Geophys. Res. Lett.*, 33, L06711, doi: 10.1029/2005GL025347. [Full paper. \(286\)](#)
 A pioneering works that delineates the global monsoon variability.
62. Wang, B., Q. Ding, and J. Jhun, 2006: **Trends in Seoul (1778-2004) summer precipitation.** *Geophys. Res. Lett.*, 33, L15803, doi: 10.1029/2006GL026418. [Full paper.](#)
63. Wang, B., P. Webster, K. kikuchi, T. Yasunari, and Y. Qi, 2006: **Boreal summer quasi-monthly oscillation in the global tropics.** *Climate Dyn.*, 27, 661-675. [Full paper. \(111\)](#)
64. Wang, B., J.-G. Jhun, and B.-K. Moon, 2007: **Variability and singularity of Seoul, South Korea, rainy season (1778-2004).** *J. Climate*, 20, 2572-2580. [Full paper.](#)
- *65. Wang, B., and Q. Ding, 2008: **Global monsoon: Dominant mode of annual variation in the tropics.** *Dynamics of Atmos. and Ocean, special issue 2*, doi: 10.1016/j.dynatmoce.2007.05.002. [Full paper. \(294\)](#)
66. Wang, B., and X. Zhou, 2008: **Climate variation and prediction of rapid intensification in tropical cyclones in the western North Pacific.** *Meteor. Atmos. Phys.*, doi: 10.1007/s00703-006-0238-z. [Full paper.](#)
- *67 Wang, B., J. Yang, T. Zhou, and B. Wang, 2008: **Interdecadal Changes in the Major Modes of Asian-Australian Monsoon Variability: Strengthening Relationship with ENSO since the Late 1970s.** *J. Climate*, 21, 1771-1789, doi: 10.1175/2007JCLI1981.1. [Full paper. \(220\)](#)
68. Wang, B., J.-Y. Lee, I.-S. Kang, J. Shukla, J.-S. Kug, A. Kumar, J. Schemm, J.-J. Luo, T. Yamagata, and C.-K. Park, 2008: **How accurately do coupled climate models predict the leading modes of Asian-Australian monsoon interannual variability?** *Climate Dyn.*, 30, 605-619, doi: 10.1007/s00382-007-0310-5. [Full paper. \(133\)](#)
- *69. Wang, B., Z. Wu, Jianping. Li, Jian Liu, C.-P. Chang, Y. Ding, and G.-X. Wu, 2008: **How to Measure the Strength of the East Asian Summer Monsoon?** *J. Climate*, 21, 4449-4463, doi: 10.1175/2008JCLI2183.1. [Full paper. \(440\)](#)
 Elaborated unique features of East Asian monsoon variability
70. Wang, B., and H. Yang, 2008: **Hydrological issues in lateral boundary conditions for regional climate modeling: simulation of east asian summer monsoon in 1998.** *Climate Dyn.*, 31, 477-490, doi: 10.1007/s00382-008 0385-7. [Full paper.](#)
- *71. Wang, B., Q. Bao, B. Hoskins, G. Wu, Y. Liu, 2008: **Tibetan Plateau warming and precipitation changes in East Asia.** *Geophys. Res. Lett.*, 35, L14702, doi: 10.1029/2008GL034330. [Full paper. \(432\)](#)
- *72. Wang, B., J.-Y. Lee and co-authors, 2009: **Advance and Prospectus of Seasonal Prediction: Assessment of the APCC/CLIPAS 14-model ensemble retrospective seasonal prediction (1980-2004).** *Climate Dyn.*, 33, 93-117, doi: 10.1007/s00382-008-0460-0. [Full paper. \(340\)](#)

Led “Climate Prediction and its Application to Society” project in support of Asian Pacific Economic Cooperation (APEC) Climate Center, which has provided leadership in two international dynamical model experiments: the “Multi-model Seasonal Hindcast Experiment” in 2005-2006.

73. Wang, B., Q. Ding, and V. Joseph, 2009: **Objective definition of the Indian summer Monsoon onset.** *J. Climate*, 22, 3303-3316. [Full paper.](#) (123)
74. Wang, B., J. Liu, J. Yang, T.-J. Zhou and Z. W.-Wu, 2009: **Distinct principal modes of early and late summer rainfall anomalies in East Asia.** *J. Climate*, C3875. [Full paper.](#)
- *75. Wang, B., F. Huang, Z. Wu, J. Yang, X. Fu, and K. Kikuchi, 2009: **Multi-Scale Climate Variability of the South China Sea Monsoon: A Review.** *Dyn. Atmos. Ocean*, 47, 15-37, doi: 10.1016/j.dynatmoce.2008.09.004. [Full paper.](#) (226)
- *76. Wang, B., Z. Wu, C.-P. Chang, J. Liu, J. Li, and T. Zhou, 2010: **Another Look at Interannual-to-Interdecadal Variations of the East Asian Winter Monsoon: The Northern and Southern Temperature Modes.** *J. Climate*, 23, C1512. IPRC 653. [Full paper.](#) (197)
77. Wang, B., Y. Yang, Q. Ding, H. Murakami, and F. Huang, 2010: **Climate control of the global tropical storm days (1965-2008).** *Geophys. Res. Lett.*, 37, L07704, doi: 10.1029/2010GL042487. [Full paper.](#)
78. Wang, B., H.-J. Kim, K. Kikuchi, and A. Kitoh, 2011: **Diagnostic metrics for evaluation of annual and diurnal cycles.** *Climate Dyn.*, 37, 941-955, doi: 10.1007/s00382-010-877-0. [Full paper.](#)
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