

Dan-Qing Huang

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Bio	Gender: Female
Research Interests	Climate Change and Simulations, specifically: <ul style="list-style-type: none">➤ Mid-to-high Latitude Atmospheric Circulations➤ Extreme Events➤ Model Uncertainty
Academic Experience	2019.12.-now School of Atmospheric Sciences, Nanjing University, Professor 2017.9.-2018.8., Department of Atmospheric and Environmental Sciences, University at Albany, SUNY, USA, Visiting Scholar 2013.12.-2019.12., School of Atmospheric Sciences, Nanjing University, Associate Professor 2009.8-2009.9, AORI, The University of Tokyo, Visiting Scholar 2009.7-2013.12., School of Atmospheric Sciences, Nanjing University, Assistant Professor
Education	School of Atmospheric Sciences, Nanjing University, 2004-2009 Ph.D. in Atmospheric Science, Degree awarded on June 2009. Advisor: Prof. Yongfu Qian and Yaocun Zhang Thesis: “The Characteristics of Temperature Extremes over China and its Relationship with Global Warming”, 165PP. Department of Atmospheric Sciences, Nanjing University, 2000-2004. B.S. in Atmospheric Science, 2004. Thesis: “Error Analysis on Tropical Cyclone Official Forecast in the Northwest Pacific from 1999 to 2003” Supervised by Prof. Yongfu Qian and Prof. Liangbo Qi

Teaching Experience	<p>Undergraduate course:</p> <p>“Fluid Dynamics”, Nanjing University, Spring, 2009-2017</p> <p>“Geophysical Fluid Dynamics”, Nanjing University, Fall, 2018-now</p> <p>The course has got the honor of “National First-class Undergraduate Course” in 2020.</p> <p>The course has available at MOOC in 2018.</p> <p>The course has got the honor of “High Quality Course of Nanjing University” in 2017.</p> <p>The course is on the reform of “Online Open Course” in 2016.</p> <p>The course is on the reform of “Flipped Classroom” in 2014.</p> <p>The course has got the honor of “National Essential Course” in 2009.</p> <p>Graduate course:</p> <p>“Climate Dynamics”, Nanjing University, Spring, 2017-present</p>
Major Research Projects	<ul style="list-style-type: none"> ✧ “Studies on Mechanism for the Impacts of the Heterogeneous Warming on the Compound Extremes” (42075020), 2020-2024, National Natural Science Foundation of China (General Program), Host. ✧ “Studies on Mechanism for the Impacts of Temperature Variation on the Warm-period Persistent Extreme Precipitation over Eastern China” (41575071), 2016-2019, National Natural Science Foundation of China (General Program), Host. ✧ “Studies on the Heterogeneous Warming Effect on the Meiyu Variation after 2000” (41105044), 2012-2015, National Natural Science Foundation of China (Young Scientists Fund), Host. ✧ “The Projections of Climate Extremes over Arid and Semi-Arid Regions the under Different Warming Scenarios”(SKLLQG1308), Open Project of State Key laboratory of Loess and Quaternary Geology, Institute of Earth Environment, 2013-2014, Host. ✧ “The Atypical variation of Meiyu and its Relationship with Land-sea Heterogeneous Warming” (KLME1105), Open Project of Key Laboratory of Meteorological Disaster of Ministry of Education, Nanjing University of Information Science and Technology, 2011-2012, Host. ✧ “The sub-seasonal scale concurrent variation of the East Asian subtropical jet and Polar-front jets and its Mechanisms” (41930969), National Natural Science Foundation of China (Key Program), 2020-2024, Key Member. ✧ “The impact of model uncertainty on the global monsoon projections”, (2020YFA0608901), National Key Research and Development Program of China, 2020-2025, Key Member. ✧ “Evolutionary characteristics and attribution of extreme weather and climate events”, (2022YFF0801601), National Key Research and Development Program of China, 2022-2027, Key Member. ✧ “The Variations of Climate Extremes in the Northern Part of China and the Mechanisms”, (2016YFA0600701), National Key Research and Development Program of China, 2016-2021, Key Member.

- ✧ “The concurrent variation of the East Asian subtropical jet and Polar-front jets and its associated Climatic Anomaly in China” (41130963), National Natural Science Foundation of China (Key Program), 2012-2016, Key Member.
- ✧ “The Application of critical signals of monthly-seasonal scale variability of East Asian Jet streams in the short-term Climate Prediction” (GYHY200906015), Project supported by the Special Scientific Research Fund of Meteorological Public Welfare Profession of China, 2010-2014, Key Member.

Publications

- [1] **Huang, D.**, A. Liu, Y. Zheng, and J. Zhu (2022). Inter-Model spread of the simulated East Asian summer monsoon rainfall and the associated atmospheric circulations from the CMIP6 Models. *J. Geophys. Res. Atmos.*, 127, e2022JD037371, <https://doi.org/10.1029/2022JD037371>.
- [2] Liu, A., Y. Huang, and **D. Huang** (2022). Inter-Model Spread of the simulated winter surface air temperature over the Eurasian Continent and the physical linkage to the jet streams from the CMIP6 models. *J. Geophys. Res. Atmos.*, 127, e2022JD037172, <https://doi.org/10.1029/2022JD037172>.
- [3] Tang, Y., A. Huang, P. Wu, **D. Huang**, D. Xue, and Y. Wu (2021). Drivers of summer extreme precipitation events over East China. *Geophys. Res. Lett.*, 1–12, <https://doi.org/10.1029/2021gl093670>
- [4] **Huang, D.**, J. Zhu, X. Xiao, J. Cheng, Y. Ding, and Y. Qian (2021). Understanding the sensitivity of hourly precipitation extremes to the warming climate over Eastern China. *Environ. Res. Commun.*, 3, <https://doi.org/10.1088/2515-7620/ac17e1>.
- [5] **Huang, D.**, Dai, A., & Zhu, J. (2020). Are the Transient and Equilibrium Climate Change Patterns Similar in Response to Increased CO₂? *J. Climate*, 33(18), 8003–8023.
- [6] Xiao, X., **D. Huang**, Yang, B., et al. (2020). Contributions of Different Combinations of the IPO and AMO to the Concurrent Variations of Summer East Asian Jets. *J. Climate*, 33(18), 7967–7982.
- [7] Dai, A., **D. Huang**, Rose, B. E., et al. (2020). Improved methods for estimating equilibrium climate sensitivity from transient warming simulations. *Clim. Dyn.*, 54(11), 4515–4543.
- [8] **Huang, D.**, A. Dai, B. Yang, et al. (2019), Contributions of Different Combinations of the IPO and AMO to Recent Changes in Winter East Asian Jets. *J. Climate*, 32, 1607–1626, doi:10.1175/JCLI-D-18-0218.1.
- [9] Zhang, Y., P. Yan, Z. Liao, **D Huang**, et al. (2019), The Winter Concurrent Meridional Shift of the East Asian Jet Streams and the Associated Thermal Conditions. *J. Climate*, 32, 2075-2088, doi:10.1175/JCLI-D-18-0085.1.
- [10] Yan, P., **D Huang**, Zhu, J., et al. (2019), The Decadal Shift of the Long Persistent Rainfall over the Northern part of China and the Associated Ocean Conditions. *Int. J. Climatol.*, 39:3043–3056, doi:10.1002/joc.6001.
- [11] **Huang, D.**, Yan, P., Zhu, J., et al., (2018) Uncertainty of global summer precipitation in the CMIP5 models: a comparison between high-resolution and low-resolution models. *Theor. Appl. Climatol.*, 132, 55-69, doi:10.1007/s00704-017-2078-9.
- [12] Wu Y., A. Huang, **D Huang**, et al., (2018) Diurnal variations of summer precipitation over the regions east to Tibetan Plateau. *Clim. Dyn.*, 51 (11-12), 4287-4307.
- [13] **Huang, D.**, A. Dai, J. Zhu, et al. (2017), Recent winter precipitation changes over Eastern China in different warming periods and the associated East Asian jets and oceanic conditions. *J. Climate*, 30, 4443–4462, doi:10.1175/JCLI-D-16-0517.1.

- [14] Zhu, J., **D. Huang**, P Yan, Y. Huang, et al. (2017) Can reanalysis datasets describe the persistent temperature and precipitation extremes over China?, *Theor. Appl. Climatol.*, 130, 655-671, doi:10.1007/s00704-016-1912-9.
- [15] **Huang, D.**, P. Yan, G. Liu, and J. Zhu, 2017: Relationship between precipitation extremes with temperature in the warm season in Anhui Province. *Clim. Environ. Res. (in Chinese)*, 22, 623–632.
- [16] Zhang M., **D. Huang**, and P. Yan, 2017: The Relationship between amplification of the subtropical stationary waves in the boreal summer and the association with precipitation extremes over China. *J. Trop. Meteorol. (in Chinese)*, 33, 716–727.
- [17] Yan, P., and **D. Huang**, 2017: The Characteristics of Summer Persistent Rainfall over Yangtze-Huaihe River Valley and its Relationship with the East Asian Jet Streams. *J. Trop. Meteorol. (in Chinese)*, 33, 741–749.
- [18] **Huang, D.**, Zhu, J., Zhang, Y.C., et al. (2015), The impact of the East Asian Subtropical Jet and Polar Front Jet on the Frequency of Spring Persistent Rainfall over southern China in 1997-2011. *J. Climate*, doi:10.1175/JCLI-D-14-00641.1.
- [19] **Huang, D.**, J. Zhu, Y. Zhang, and A. Huang (2014), The different configurations of the East Asian Polar Front Jet and Subtropical Jet and the associated rainfall anomalies over Eastern China in summer. *J. Climate*, 27, 8205–8220.
- [20] **Huang, D.**, J. Zhu and Y. Zhang, et al. (2013), Uncertainties on the simulated summer precipitation over Eastern China from the CMIP5 models, *J. Geophys. Res. Atmos.*, 118, 9035-9047, doi: 10.1002/jgrd.50695.
- [21] **Huang, D.**, Zhu, J., Zhang, Y., Huang, Y., 2015. Assessment of summer monsoon precipitation derived from five reanalysis datasets over East Asia. *Q. J. R. Meteorol. Soc.* doi:10.1002/qj.2634.
- [22] **Huang, D.**, Y. Qian, and J. Zhu (2012), The heterogeneity of Meiyu rainfall over Yangtze-Huaihe River valley and its relationship with oceanic surface heating and intraseasonal variability, *Theor. Appl. Climatol.*, 108(3-4): 601-611.
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- [26] Zhu J., **D. Huang**, T. Yang (2015), Changes of Meiyu System in Future under A1B Scenario Simulated by MIROC_hires Model, *Theoretical and Applied Climatology*, DOI: 10.1007/s00704-015-1371-8.
- [27] Zhu J., **D. Huang**, Y. Dai, X. Chen (2015), Recent heterogeneous warming and the associated summer precipitation over eastern China, *Theoretical and Applied Climatology*, DOI: 10.1007/s00704-015-1380-7.

- [28] **Huang, D.**, Y. Qian, and J. Zhu (2010), Trends of temperature extremes in China and their relationship with global temperature anomalies, *Adv. Atmos. Sci.*, 27(4): 937-946.
- [29] **Huang, D.** and Y. Qian (2009). The effects of terrain slope and orientation on different weather processes in China under different model resolutions, *Acta Meteor. Sinica*, 23 (5): 617-628.
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- [33] Kuang, X., Y. Zhang, Y. Huang, and **D. Huang** (2014), Changes in the frequencies of record-breaking temperature events in China and its association with East Asian Winter Monsoon variability, *J. Geophys. Res. Atmos.*, 119, 1234–1248, doi:10.1002/2013JD020965.
- [34] Huang, A., Y. Zhou, Y. Zhang, **D. Huang**, Y. Zhao, and H. Wu (2014), Changes of the Annual Precipitation over Central Asia in the 21st Century Projected by Multi- models of CMIP5. *J. Climate*. doi:10.1175/JCLI-D-14-00070.1.
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- [36] Huang, Y., Y. Zhang, A. Huang, X. Kuang, **D. Huang**, Y. Yao, and L. Zhang, (2014), Analysis of the simulated different-class Meiyu precipitation and associated circulation by the BCC_AGCM2.0.1. *Theor. Appl. Climatol.*, doi:10.1007/s00704-014-1195-y.
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- [41] **D. Huang**, Y. Qian (2007), The elementary analysis of summer extreme precipitation events simulated by Community Climate Model3, *Journal of Nanjing University (Natural Sciences) (in Chinese)*, 43(3): 238-248.

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- [43] Zhao Y., **D. Huang**, J. Zhu, et al. (2011), The feature analysis of regional and persistent extreme precipitation events in Northern Xinjiang region, *Journal of Glaciology and Geocryology (in Chinese)*, 33: 524-531.
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- [45] Zhao Y., **D. Huang**, Q. Yang, et al. (2012), Analysis on Variation of Precipitation in Flood Season in North Xinjiang, *Arid Zone Research (in Chinese)*, 29(1): 35-40
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- [47] Zhao Y., **D. Huang**, Guli, et al. (2010), Analysis on summer heavy rainfall in the Northern Xinjiang, *Arid Zone Research (in Chinese)*, 27(5): 773-779.
- [48] Zhu J., Y. Zhang, and **D. Huang** (2009), Analysis of Changes in Different-class precipitation over Eastern China under global warming, *Plateau Meteorology (in Chinese)*, 28(4): 889-896.
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- [51] Qi L., **D. Huang** and Hui Y. (2006), Error analysis on tropical cyclone official forecast in the northwest pacific from 1999 to 2003, *Journal of Applied Meteorological Science (in Chinese)*, 17(1): 73-80.

Academic
Service

Reviewer for Bulletin of the American Meteorological Society, Journal of Climate, Climate Dynamics, International Journal of Climatology, Journal of Geophysical Research-Atmosphere, and et al.

Honors&Awards

“Best Undergraduate Teaching” for young teachers in the field of Atmospheric Sciences , The Ministry of Education, 2015

“Teaching Achievement Award” for young faculty, Nanjing University, 2014

“Best undergraduate teaching” for young faculty, School of Atmospheric Sciences, Nanjing University, 2010