

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> <p>The course has got the honor of “Three Hundreds” Key Courses in 2022</p> <p>The course is on the reform of “Postgraduate Course Ideological and Political Benchmarking Course Cultivation Project” in 2022.</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] Liu, A., **Huang, D.**, & Huang, A. (2023). The Leading Intermodel Spread of the Projected Changes in the Eurasian Continent Winter Surface Air Temperature and Large-Scale Circulations From the CMIP6 Simulations. *Journal of Geophysical Research: Atmospheres*. 128, e2023JD038829. <https://doi.org/10.1029/2023JD038829>
- [2] Liu, Y., **Huang, D.**, Zhu, J. et al. (2023). The Quadrupole Precipitation Pattern over Eastern China and Its Associated Atmospheric Circulations and Ocean Conditions. *Journal of Climate*. <https://doi.org/10.1175/JCLI-D-22-0075>
- [3] Zhao, S., **Huang, D.**, Zhu, J. et al. (2023). The Ellipse-fitting Detection of Winter North Pacific Jet and the Associated Air Temperature Variations in the Northern Hemisphere. *Journal of Geophysical Research: Atmospheres*. <https://doi.org/10.1029/2022JD038177>
- [4] Xu, X., Huang, A., **Huang, D.**, et al. (2023). What Are the Dominant Synoptic Patterns Leading to the Summer Regional Hourly Extreme Precipitation Events Over Central-Eastern Tibetan Plateau and Sichuan Basin? *Geophysical Research Letters*, 50(5), 1–12. <https://doi.org/10.1029/2022gl102342>
- [5] Zhu, J., Dai, A., **Huang, D.**, et al.. (2023). Subtropical drying under greenhouse gas-induced warming. *Climate Dynamics*. <https://doi.org/10.1007/s00382-023-06797-5>
- [6] Hou, C., **Huang, D.**, Xu, H. et al.. (2022). Evaluation of ERA5 reanalysis over the deserts in northern China. *Theoretical and Applied Climatology*. <https://doi.org/10.1007/s00704-022-04306-y>
- [7] **Huang, D.**, A. Liu, Y. Zheng, et al. (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>.
- [8] 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>.
- [9] 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>
- [10] **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>.
- [11] **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.
- [12] 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.
- [13] 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.
- [14] **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.
- [15] 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.
- [16] 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.
- [17] **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.
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- [22] 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.
- [23] 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.
- [24] **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.
- [25] **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.
- [26] **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.
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- [28] **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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- [31] Zhu J., **D. Huang**, and Y. Zhang (2013), Decadal changes of Meiyu rainfall around 1991 and its relationship with two types of ENSO, *J. Geophys. Res. Atmos.*, 118, 9766-9777, doi: 10.1002/jgrd.50779.
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- [34] **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.
- [35] **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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- [42] 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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- [46] **D. Huang**, Y. Qian (2008), The definition of daily mean temperature extremes over China and its trends. *Acta Scientiarum Naturalium Universitatis Sunyatseni (in Chinese)*, 47(3): 112-116
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- [52] Zhao Y., **D. Huang**, J. Zhu, et al. (2010), The Preliminary Analysis of Extreme Precipitation Events in Northern Xinjiang, *Desert and Oasis Meteorology (in Chinese)*, 4(5): 1-5.
- [53] 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.
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- [57] 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