

## Yongjie Huang

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### Research Interests

- Atmospheric dynamics, numerical modeling (LES, CRM), data assimilation, and cloud microphysics
- Severe convective systems, extreme rainfall events, regional climate
- Tropical cyclones

### Education

- 2012/09-2017/01 **Ph.D.**, Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China
- 2008/09-2012/07 **B.S.**, Department of Atmospheric Sciences, Sun Yat-Sen University, Guangzhou, China

### Research Experience

- 2018/12-Present **Postdoctoral Researcher**, School of Meteorology, University of Oklahoma, Norman, OK
- 2017/02-2018/12 **Postdoctoral Visiting Scholar** (UCAR Funded), Research Applications Laboratory, National Center for Atmospheric Research, Boulder, CO
- 2012-2017/01 **Graduate Research Assistant**, Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China.
- 2009-2012 **Undergraduate Research Assistant** at Atmospheric Observation Laboratory, Sun Yat-sen University, Guangzhou, China.

## Professional Experience

- 2017/02-2018/12 Develop Real-time Forecasting System for Convective-scale Weather, NCAR/RAL, Boulder, CO, USA
- 2015/09-2016/01 Teaching assistant, University of Chinese Academy of Sciences, China
- 2015/09 Gave a series of lectures on basis of the NCAR Command Language (NCL) in National Meteorological Information Center (NMIC), China Meteorological Administration (CMA), Beijing, China
- 2015/05-2015/06 Test of the first dataset of CIPAS2.0 in National Meteorological Information Center (NMIC), China Meteorological Administration (CMA), Beijing, China
- 2014-2015 Regular operation and test of **TCwind**, Combination of Research and Operation (CRO), National Meteorological Center (NMC), China Meteorological Administration (CMA), Beijing, China
- 2011/10-2013/03 Part-time Data-processing at South China Sea Marine Prediction Center, Guangzhou, China
- 2011/08 Meteorological volunteer of the 26th Summer Universiade, Shenzhen, China
- 2011/06-2011/07 Weather research practice in Institute of Urban Meteorology (IUM), China Meteorological Administration (CMA), Beijing, China

## Honors and Awards

- 2018.06 Outstanding Reviewer Awards for *Atmospheric Research*
- 2017 Outstanding Doctoral Dissertation Award, Institute of Atmospheric Physics
- 2017 Outstanding Graduates, Beijing Municipal Education Commission, China
- 2016 Chinese Academy of Sciences President Award, the highest award for students of the Chinese Academy of Sciences
- 2016 Travel Award to Attend International Academic Conference, Chinese Academy of Sciences
- 2016 Pacemaker to Merit Student of University of Chinese Academy of Sciences, China
- 2016 Special Prize of Science Popularization Competition, Chinese Academy Youth League
- 2015 Graduate Student National Scholarship (Doctor), granted by the Ministry of Education of China
- 2014 Graduate Student National Scholarship (Master), granted by the Ministry of Education of China
- 2014 Merit Student of University of Chinese Academy of Sciences, China
- 2013 Merit Student of University of Chinese Academy of Sciences, China
- 2013 Outstanding Student Cadre of University of Chinese Academy of Sciences, China
- 2012-2017 Graduate Student Scholarship, Institute of Atmospheric Physics, Chinese Academy of Sciences
- 2012 Outstanding Undergraduate Award of Sun Yat-Sen University, China
- 2012 Outstanding Undergraduate Thesis Award of Sun Yat-Sen University, China
- 2011 Third Prize of Outstanding Student Scholarship of Sun Yat-Sen University, China
- 2010 Undergraduate Student National Scholarship, granted by the Ministry of Education of China
- 2010 First Prize of Outstanding Student Scholarship of Sun Yat-Sen University, China
- 2009 Undergraduate Student National Scholarship, granted by the Ministry of Education of China
- 2009 First Prize of Outstanding Student Scholarship of Sun Yat-Sen University, China

**Publications (peer-reviewed)**

Corresponding authors denoted with "\*".

- 2019
17. **Huang, Y.**, et al., 2019: Budget analyses of a record-breaking rainfall in the coastal metropolitan city of Guangzhou, China. Under Review.
16. **Huang, Y.**, et al., 2019: Mechanisms for a record-breaking rainfall in the coastal metropolitan city of Guangzhou, China: observation analysis and nested very-large-eddy simulation with the WRF Model. *Journal of Geophysical Research-Atmospheres*, 124. <https://doi.org/10.1029/2018JD029668>.
15. **Huang, Y.**, Y. Wang, and X. Cui\*, 2019: Differences between Convective and Stratiform Precipitation Budget Processes in a Torrential Rainfall Event. *Advances in Atmospheric Sciences*, In press. <https://doi.org/10.1007/s00376-019-8159-1>.
14. Wang, Y., C. A. Davis, and **Y. Huang**, 2019: Dynamics of lower-tropospheric vorticity in idealized simulations of tropical cyclone formation. *Journal of the Atmospheric Sciences*, 76, 707-727. <https://doi.org/10.1175/JAS-D-18-0219.1>.
13. Wang, Y., **Y. Huang**, and X. Cui\*, 2019: Surface rainfall processes during the genesis period of tropical cyclone Durian (2001). *Advances in Atmospheric Sciences*, 36(4), 451-464. <https://doi.org/10.1007/s00376-018-8157-8>.
- 2018
12. Wang, Y., **Y. Huang**, and X. Cui\*, 2018: Impact of middle-to-upper-level dry air on tropical cyclone genesis: A modeling study of Durian (2001). *Advances in Atmospheric Sciences*, 35(12), 1505-1521. <https://doi.org/10.1007/s00376-018-8039-0>.
11. **Huang, Y.**, Y. Liu\*, M. Xu, et al., 2018: Forecasting Severe Convective Storms with WRF-based RTFDDA Radar Data Assimilation in Guangdong, China. *Atmospheric Research*, 209, 131-143. <https://doi.org/10.1016/j.atmosres.2018.03.010>
- 2016
10. Wang, Y., X. Cui, and **Y. Huang\***, 2016: Characteristics of Multiscale Vortices in the Formation of Simulated Typhoon Durian (2001). *Atmospheric Science Letters*, 17, 492-500. <http://dx.doi.org/10.1002/asl.683>
9. Wang, Y., X. Cui\*, X. Li, W. Zhang, and **Y. Huang**, 2016: Budget analysis of kinetic energy during the genesis period of tropical cyclone Durian (2001) in the South China Sea. *Monthly Weather Review*, 144, 2831-2854. <http://dx.doi.org/10.1175/MWR-D-15-0042.1>
8. **Huang, Y.**, X. Cui\*, 2016c: Spectral characteristics of terrain in the Sichuan basin and horizontal grid size selection for mesoscale model. *Acta Meteorologica Sinica*, 74(1), 114-126. <http://dx.doi.org/10.11676/qxxb2016.010> (in Chinese)
7. **Huang, Y.**, X. Cui\*, and Y. Wang, 2016b: Cloud microphysical differences with precipitation intensity in a torrential rainfall event in Sichuan, China. *Atmospheric and Oceanic Science Letters*, 9(2), 90-98. <http://dx.doi.org/10.1080/16742834.2016.1139436>
6. **Huang, Y.**, X. Cui\*, and X. Li, 2016a: A three-dimensional WRF-based precipitation equation and its application in the analysis of roles of surface evaporation in a torrential rainfall event. *Atmospheric Research*, 169, 54-64. <http://dx.doi.org/10.1016/j.atmosres.2015.09.026>
- 2015
5. Dong, L.\*, B. Wang, L. Liu, and **Y. Huang**, 2015: Lagrangian advection scheme with shape matrix (LASM) v0.2: interparcel mixing, physics-dynamics coupling and 3-D extension. *Geoscientific Model Development*, 8, 2675-2686. <http://dx.doi.org/10.5194/gmd-8-2675-2015>

4. **Huang, Y.**, and X. Cui\*, 2015c: Moisture Sources of Torrential Rainfall Events in the Sichuan Basin of China during Summers of 2009-13. *Journal of Hydrometeorology*, 16, 1906-1917. <http://dx.doi.org/10.1175/JHM-D-14-0220.1>
3. **Huang, Y.\***, and X. Cui, 2015b: Moisture sources of an extreme precipitation event in Sichuan, China, based on the Lagrangian method. *Atmospheric Science Letters*, 16, 177-183. <http://dx.doi.org/10.1002/asl2.562>
2. **Huang, Y.**, and X. Cui\*, 2015a: Dominant cloud microphysical processes of a torrential rainfall event in Sichuan, China. *Advances in Atmospheric Sciences*, 32, 389-400. <http://dx.doi.org/10.1007/s00376-014-4066-7>
1. Xu, L., X. Cui, S. Gao, and **Y. Huang**, 2015: Cause analysis of sudden track change of Typhoon Megi (1013). *Transactions of Atmospheric Sciences*, 38, 658-669. <http://dx.doi.org/10.13878/j.cnki.dqkxxb.20130301001> (in Chinese)

## Journal Reviews

Journal of Geophysical Research - Atmospheres, Atmospheric Research, Atmospheric Science Letters, Journal of Meteorological Research, Advances in Meteorology, Natural Hazards

## Conference and Workshop

- 2018/10 29th Conference on Severe Local Storms, 22-26 October 2018, Stowe, VT, US. [Abstract](#)
- 2018/01 98th AMS Annual Meeting, Austin, US. (Poster)
- 2017/06 The 18th Annual WRF Users' Workshop, Boulder, CO (Oral presentation)
- 2016/12 Atmospheric Sciences Symposium among Cross-Strait Universities (Chu Kochen Forum), Nanjing, China. (Oral presentation)
- 2016/11 The 33rd Annual Meeting of Chinese Meteorological Society, Xi'an, China. (Oral presentation)
- 2016/10 (Invited Talk) Spectral characteristics of terrain in the Sichuan basin and the horizontal grid size selection for a mesoscale model, School of Atmospheric Sciences Seminar Series, Sun Yat-sen University
- 2016/07 The 17th International Conference on Clouds & Precipitation, Manchester, UK. (Poster)
- 2015/10 Plateau and Mountain Meteorology Research and Heavy Rain and Drought-Flood Disasters in Plateau and Basin Key Laboratory of Sichuan Province Symposium, Lhasa, China. (Oral presentation)
- 2015/08 The 1st "Huan Jing Feng Yun" Postgraduate Academic Forum, Sun Yat-sen University, Guangzhou, China. (Oral presentation-Excellent Paper Award)
- 2015/01 International Workshop on High Impact Weather Research, Ningbo, China. (Poster)
- 2014/11 The 31st Annual Meeting of Chinese Meteorological Society, Beijing, China. (Excellent poster)
- 2014/10 National Atmospheric Sciences Postgraduate Academic Forum and the 12th Cross-Strait Youth Symposium, Beijing, China. (Oral presentation)

## **Numerical Modeling and Computer Skills**

**Operating system:** Mac OS X, Linux/Unix, Microsoft Windows

**Models/tools:** WRF/WRFDA/GSI, ARPS, RAMS, MPAS, FLEXPART, MET

**Programming language:** Fortran, Matlab, Maple, C/C++, Python, Perl, Shell Script, GrADS, NCL, and LaTeX, etc.

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