

## Publications

### Book Chapters

**Chen, H.\***, and V. Chandrasekar, 2018: Real-time wind velocity retrieval in the precipitation system using high-resolution operational multi-radar network. *Remote Sensing of Aerosols, Clouds, and Precipitation*, Elsevier, 315-339.

### Peer-reviewed Journal Articles (\* denotes corresponding author)

[J63] **Chen, H.\***, L. Sun, R. Cifelli, and P. Xie, 2022: Deep learning for bias correction of satellite retrievals of orographic precipitation. *IEEE Transactions on Geoscience and Remote Sensing*, **60**, 1-11, Art no. 4104611.

[J62] Zeng, Z., **H. Chen**, Q. Shi, and J. Li\*, 2022: Spatial downscaling of IMERG considering vegetation index based on adaptive lag phase. *IEEE Transactions on Geoscience and Remote Sensing*, **60**, 1-15, Art no. 4201415.

[J61] Han, L., Y. Zhao, **H. Chen\***, and V. Chandrasekar, 2022: Advancing radar nowcasting through deep transfer learning. *IEEE Transactions on Geoscience and Remote Sensing*, **60**, 1-9, Art no. 4100609.

[J60] Li, Z., **H. Chen\***, H. Chu, H. Tan, V. Chandrasekar, X. Huang, and S. Wang, 2021: Multivariate analysis and warning of a tornado embedded in tropical cyclone in Southern China. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, **14**, 11517-11529.

[J59] Sun, L., **H. Chen**, Z. Li, and L. Han\*, 2021: Cross validation of GOES-16 and NOAA Multi-Radar Multi-Sensor (MRMS) QPE over the Continental United States. *Remote Sens.*, **13**, 4030.

[J58] Pincus, R.\*, C. W. Fairall, A. Bailey, **H. Chen**, P. Y. Chuang, et al., 2021: Observations from the NOAA P-3 aircraft during ATOMIC. *Earth Syst. Sci. Data*, **13**, 3281–3296.

[J57] Yin, J., **H. Chen\***, Y. Li, and X. Wang, 2021: Clutter mitigation based on spectral depolarization ratio for dual-polarization weather radars. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, **14**, 6131-6145.

[J56] Ma, Y.\*, V. Chandrasekar, **H. Chen**, and R. Cifelli, 2021: Quantifying the potential of AQPI gap-filling radar network for streamflow simulation through a WRF-Hydro experiment. *Journal of Hydrometeorology*, **22(7)**, 1869-1882.

[J55] Huang, H., K. Zhao\*, **H. Chen**, G. Chen, D. Hu, Y. Zhang, Z. Yang, 2021: Improving time-efficiency of variational specific differential phase estimation. *IEEE Transactions on Geoscience and Remote Sensing*, **59(7)**, 5642-5664.

[J54] Ma, Y., X. Sun\*, **H. Chen**, Y. Hong, and Y. Zhang, 2021: A two-stage blending approach for merging multiple satellite precipitation estimates and rain gauge observations: an experiment in the northeastern Tibetan Plateau, *Hydrol. Earth Syst. Sci.*, **25**, 359–374.

[J53] Gou, Y., and **H. Chen\***, 2021: Combining radar attenuation and partial beam blockage corrections for improved quantitative application. *Journal of Hydrometeorology*, **22(1)**, 139-153.

[J52] Ji, L., W. Xu\*, **H. Chen**, N. Liu, 2022: Consistency of vertical reflectivity profiles and echo-top heights between spaceborne radars onboard TRMM and GPM. *Remote Sens.*, **14**, 1987.

[J51] Huang, H., K. Zhao\*, P. Fu, **H. Chen**, G. Chen, and Y. Zhang, 2022: Validation of precipitation measurements from the dual-frequency precipitation radar onboard the GPM Core Observatory using a polarimetric radar in South China. *IEEE Transactions on Geoscience and Remote Sensing*, **60**, 1-16, Art no. 4104216.

[J50] Liu, K., J. He\*, and **H. Chen**, 2022: Precipitation retrieval from Fengyun-3D microwave humidity and temperature sounder data using machine learning. *Remote Sens.*, **14**, 848, doi: 10.3390/rs14040848.

[J49] Han, L., H. Liang, **H. Chen**, W. Zhang\*, and Y. Ge, 2022: Convective precipitation nowcasting using U-Net model. *IEEE Transactions on Geoscience and Remote Sensing*, **60**, 1-8, Art no. 4103508.

[J48] Pan, X., Y. Lu, K. Zhao\*, H. Huang, M. Wang, and **H. Chen**, 2021: Improving nowcasting of convective development by incorporating polarimetric radar variables into a deep-learning model. *Geophysical Research Letters*, **48**, e2021GL095302, doi: 10.1029/2021GL095302.

[J47] Zhang, Y., S. Bi\*, L. Liu, **H. Chen**, and Coauthors, 2021: Deep Learning for Polarimetric Radar Quantitative Precipitation Estimation during Landfalling Typhoons in South China. *Remote Sens.*, **13**, 3157.

[J46] Luo, L., J. Guo, **H. Chen\***, M. Yang, M. Chen, H. Xiao, J. Ma, and S. Li, 2021: Microphysical characteristics of rainfall observed by a 2DVD disdrometer during different seasons in Beijing, China. *Remote Sens.*, **13**, 2303

[J45] Han, L., M. Chen\*, K. Chen, **H. Chen**, Y. Zhang, B. Lu, L. Song, and R. Qin, 2021: A deep learning method for bias correction of ECMWF 24-240h forecasts. *Adv. Atmos. Sci.*, **38**, 1444–1459.

[J44] Tao, R., K. Zhao\*, H. Huang, L. Wen, G. Zhang, A. Zhou, and **H. Chen**, 2021: Snow particle size distribution from a 2-d video disdrometer and radar snowfall estimation in East China. *IEEE Transactions on Geoscience and Remote Sensing*, **59(1)**, 196-207.

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- [J40] Huang, H., K. Zhao\*, **H. Chen**, D. Hu, P. Fu, Q. Lin, and Z. Yang, 2020: Improved attenuation-based radar precipitation estimation considering the azimuthal variabilities of microphysical properties. *J. Hydrometeorol.*, **21(7)**, 1605-1620.
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- [J35] Sun, Y., H. Xiao\*, H. Yang, L. Feng, **H. Chen**, L. Luo, 2020: An inverse mapping table method for raindrop size distribution parameters retrieval using X-band dual-polarization radar observations. *IEEE Transactions on Geoscience and Remote Sensing*, **58(11)**, 7611-7632.
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- [J30] **Chen, H.\***, V. Chandrasekar, H. Tan, and R. Cifelli, 2019: Rainfall estimation from ground radar and TRMM precipitation radar using hybrid deep neural networks. *Geophysical Research Letter*, **46**, 10669-10678.
- [J29] **Chen, H.\***, R. Cifelli, V. Chandrasekar, and Y. Ma, 2019: A flexible Bayesian approach to bias correction of radar-derived precipitation estimates over complex terrain: Model design and initial verification. *Journal of Hydrometeorology*, **20**, 2367-2382.
- [J28] Gou, Y., **H. Chen\***, and J. Zheng, 2019: An improved self-consistent approach to attenuation correction for C-band polarimetric radar measurements and its impact on quantitative precipitation estimation. *Atmospheric Research*, **226**, 32-48.
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