Basic Information

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Research Interests

Cloud physics and radiative processes (e.g., cloud-sea ice interaction, seasonal sea ice prediction, and radiance trend & attribution)

Satellite remote sensing (e.g., cloud mask production, cloud albedo retrieval, and satellite instrument calibration)

Computer Abilities:

Skilled in use of Python, Fortran.
Experienced in use of Linux, supercomputer, and AWS cloud infrastructure.

Employment

2019—Present, Research Scientist @ Meteorological Service of New Zealand Limited

2020—Present, Adjunct Research Assistant Professor @ University of Illinois at Urbana-Champaign

2017—2019, Postdoctoral Research Associate @ University of Illinois at Urbana-Champaign (with Prof. Larry Di Girolamo)

Education

2013—2017, *PhD, Physics,* **University of Auckland, Auckland, New Zealand** (with Prof. Roger Davies)

2010—2013, *Master, Atmospheric Remote Sensing,* **NUIST, Nanjing, China**

2006—2010, *Bachelor, Meteorology*, **Nanjing University of Information, Science and Technology (NUIST), Nanjing, China** (with Prof. Zhenhui Wang)

Refereed Publications

L. D. Girolamo, **Y. Zhan**, Guangyu Zhao, et al. (2019), MAIA Level 1 Cloud Mask Algorithm Theoretical Basis, *Jet Propulsion Laboratory*.

Y. Zhan, L. D. Girolamo, R. Davies, and C. Moroney (2018), Instantaneous top-of-atmosphere albedo comparison between CERES and MISR over the Arctic, *Remote Sensing*, doi: 10.3390/rs10121882.

Y. Zhan, and R. Davies (2017), September Arctic sea-ice extent indicated by reflected solar radiation, *J. Geophys. Res. Atmos.*, doi: 10.1002/2016JD025819.

Y. Zhan, and R. Davies (2016), Intercalibration of CERES, MODIS, and MISR reflected solar radiation and its application to albedo trends, *J. Geophys. Res. Atmos.*, doi:10.1002/2016JD025073.

Y. Zhan, Z. Wang, and Z. Zhang (2012), Wind fields in dust storm clear sky region from the FY-2E split window channels, *Journal of Remote Sensing.,* doi: 10.11834/jrs.20121208**.**

Y. Zhan et al. (2011), Advances of satellite derived winds in the forecasts of typhoon tracks, *Advances in Earth Science*, 26(4), 386--393.

Zhao, G., M. Yang, Y. Gao, **Y. Zhan**, H.-K. Lee, & Di Girolamo, L. (2020). PYTAF: a python tool for spatially resampling Earth observation data. Earth Science Informatics.

B. Lee, L. D. Girolamo, G. Zhao, **Y. Zhan** (2018). Three-dimensional cloud volume reconstruction from the Multi-angle Imaging SpectroRadiometer, *Remote Sensing,* doi: 10.3390/rs10111858.

Q. Zhang, Z. Wang, **Y. Zhan**, H. Zhao (2015). Research in the derivation of clear sky wind fields surrounding typhoon based on the FT-2E split window technique, *Journal of Tropical Meteorology*, doi: 10.16032/j.issn.1004-4965.2015.01.009.

Z. Wang, M. Tang, **Y. Zhan** et al. (2014). Numerical study and instance analysis of tracer extract on retrieving atmospheric motion vectors with satellite split-window channels for cloud-free regions, *Journal of Remote Sensing.,* doi: 10.11834/jrs.20143252**.**

L. Yang, Z. Wang, **Y. Zhan** (2013), Derivation of wind fields in dust storm region of clear-sky from FY-2E infrared window imagery using the time difference technique, *Journal of Remote Sensing.,* doi: 10.11834/jrs.20132262.

Invited talks and proceedings

Y. Zhan, L. D. Girolamo, G. Zhao (2019), Global spectral and texture trends as observed from Terra. MISR Science Team Meeting, Pasadena, CA.

Y. Zhan, L. D. Girolamo, G. Zhao (2018), Global spectral and texture trends as observed from Terra. Oral presented in *A Spectral View of Aerosols, Clouds, and Earth's Energy Budget*, AGU Fall Meeting, Washington D. C., United States.

Y. Zhan, and R. Davies (2018), June TOA albedo: A feasible indicator of Arctic September sea ice extent, MISR Science Team Meeting, Pasadena, CA.

Y. Zhan, and R. Davies (2017), September sea-ice extent predicted by June reflected solar radiation, *AIP Conference Proceedings*. Vol. 1810. No. 1. AIP Publishing.

Y. Zhan, and R. Davies (2016), September sea-ice extent predicted by June reflected solar radiation. Oral presented in *Understanding Climate Using Satellite,* 35th International Radiation Symposium, Auckland, New Zealand.

Y. Zhan and R. Davies (2016), Comparison of CERES and MISR retrieved top-of-atmosphere albedo over the Arctic. Oral presented in *Calibration and Validation of Satellite Microwave, Infrared, and Solar Reflected Observations I*, AGU Fall Meeting, San Francisco, CA, United States.

Y. Zhan, and R. Davies (2016), Comparison of CERES and MISR retrieved top-of-atmosphere albedo over the Arctic, MISR Science Team Meeting, Pasadena, CA.

Z. Wang, **Y. Zhan** et al. (2013), The significance analysis of FY-2E split window data for "clear region" AMVs derivation, *AIP Conference Proceedings* Vol. 1531, No. 1. AIP Publishing.