

Curriculum Vitae

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Education

2010	Ph.D. in atmospheric sciences	Stony Brook University
2002	M.S. in atmospheric sciences	Nanjing University, China
1999	B.S. in atmospheric sciences	Nanjing University, China

Professional experience

2010.12-present	Postdoctoral scholar at Jet Propulsion Lab through JIFRESSE/UCLA
2010.9-2010.11	Postdoctoral scholar at Stony Brook University
2004-2010	Research assistant at Stony Brook University
2003-2004	Teaching assistant at Stony Brook University
2002-2003	Weather forecaster at Shanghai Weather Forecast Center, China
1999-2002	Research assistant at Nanjing University, China

Research Interests

My general research interests lie in climate variability and climate change. Specifically, they include:

- i) Dynamics and variability of extratropical cyclones, storm tracks, and large scale circulation;
- ii) Tropical variability: the Madden - Julian Oscillation; tropical cyclones;
- iii) Application of satellite observations

Research Strength

i) I have extensive experience in analyzing large datasets including the reanalysis, model simulations and various observations. Major datasets used include:

- NCEP/NCAR reanalysis and ECMWF reanalysis (ERA-15, ERA-40, and ERA-Interim)
- IPCC CMIP3 and CMIP5 (Coupled Model Intercomparison Project) simulations
- Satellite observations from MODIS (Moderate Resolution Imaging Spectroradiometer), MISR (Multi-angle Imaging SpectroRadiometer), CloudSat, and etc.
- COSMIC (Constellation Observing System for Meteorology, Ionosphere & Climate) GPS satellite radio occultation observations
- Radiosonde observations
- COADS (Comprehensive Ocean-Atmosphere Data Set) ship observations

- ii) Experienced in running and modifying stationary wave model (GFDL dynamical core)
- iii) Experience in running NCAR/CAM-3.0 (the Community Atmosphere Model)
- iv) Proficient in Fortran, IDL, Unix/Linux shell script coding, and GrADS analysis package

Peer-reviewed publications

Guo, Y*, D. E. Waliser, and X. Jiang, 2014: A Systematic Relationship between Convectively Coupled Equatorial Wave Activity and the Performance of the Madden-Julian Oscillation in Climate Model Simulations. *J. Clim.*, in revision.

Guo, Y*, X. Jiang, and D. E. Waliser, 2014: Modulation of the Convectively Coupled Kelvin Waves over South America and the Tropical Atlantic Ocean in Association with the Madden-Julian Oscillation. *J. Atmos. Sci.*, 71, 1371–1388. doi: <http://dx.doi.org/10.1175/JAS-D-13-0215.1>

Guo, Y*, B. Tian, R. A. Kahn, O. Kalashnikova, S. Wong, and D. E. Waliser, 2013: Tropical Atlantic dust and smoke aerosol variations related to the Madden-Julian Oscillation in MODIS and MISR observations, *J. Geophys. Res. Atmos.*, 118, 4947-4963, doi:10.1002/jgrd.50409.

Chang, E.K.M., **Y. Guo***, X. Xia, and M. Zheng, 2013: Storm track activity in IPCC AR4/CMIP3 model simulations. *J. Climate*, 26, 246-, doi:10.1175/JCLI-D-11-00707.1.

Chang, E.K.M., **Y. Guo***, and X. Xia, 2012: CMIP5 multimodel ensemble projection of storm track change under global warming. *J. Geophys. Research*, 117, D23118, doi:10.1029/2012JD018578.

Chang, E.K.M., and **Y. Guo***, 2012: Is Pacific storm-track activity correlated with the strength of upstream wave seeding? *J. Climate*, 25, 5768-5776.

Chang, E.K.M., and **Y. Guo***, 2011: Comments on “The Source of the Midwinter Suppression in Storminess over the North Pacific”, *J. Climate*, 24, 5187–5191.

Guo, Y.*, E.K.M. Chang, and S.S. Leroy, 2009: How strong are the Southern Hemisphere storm tracks? *Geophys. Res. Lett.*, 36, L22806, doi: 10.1029/2009GL040733.

Guo, Y.*, and E.K.M. Chang, 2008: Impacts of assimilation of satellite and rawinsonde observations on Southern Hemisphere baroclinic wave activity in the NCEP/NCAR reanalysis. *J. Climate*, 21, 3290-3309.

Chang, E.K.M., and **Y. Guo***, 2008: Reply to comment by Lennart Bengtsson and Kevin I. Hodges on “Is the number of North Atlantic tropical cyclones significantly underestimated prior to the availability of Satellite observations?”. *Geophys. Res. Lett.*, 35, L09811, doi: 10.1029/2007GL032936.

Chang, E.K.M., and **Y. Guo***, 2007: Is the number of North Atlantic tropical cyclones significantly underestimated prior to the availability of satellite observations? *Geophys. Res. Lett.*, 34, L14801, doi: 10.1029/2007GL030169.

Chang, E.K.M., and **Y. Guo***, 2007: Dynamics of the stationary anomalies associated with the interannual variability of the mid-winter Pacific storm track – the roles of tropical heating and remote eddy forcing. *J. Atmos. Sci.*, 64, 2442-2461.

Yang X.Q., Q. Xie, Y.M. Zhu, X.G. Sun, and **Y. Guo***, 2005: Decadal-to-interdecadal variability of precipitation in North China and associated atmospheric and oceanic anomaly patterns. *Chinese Journal of Geophysics*, 48(4), 61-69.

Yang X.Q., **Y. Guo***, and G.Y. Xu, 2002: Comparison of global spatio-temporal structures between interannual and interdecadal climate variations. *Journal-Nanjing University Natural Sciences Edition*, 38(3), 308-317. (In Chinese)

Guo Y.*, and X.Q. Yang, 2002: Characteristics of the interannual and interdecadal variabilities in the global ocean-atmosphere system. *Scientia Meteorologica Sinica*, 22(2), 127-138. (In Chinese)