

Tianyu Jiang

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Education

<u>Georgia Institute of Technology</u>	Atlanta, GA
<i>Ph.D. Atmospheric Dynamics</i>	2013
<u>Peking University</u>	Beijing, China
<i>M.S. Meteorology</i>	2008
<u>Peking University</u>	Beijing, China
<i>B.S. Atmospheric Science</i>	2005

Work and Research Experience

<u>Postdoctoral Research Associate</u>	2013-present
<i>Oak Ridge National Lab</i>	<i>Oak Ridge, TN</i>

Working on DOE project: "Ultra High Resolution Global Climate Simulation to Explore and Quantify Predictive Skill for Climate Means, Variability and Extremes"

<u>Graduate Research Associate</u>	2008 - 2013
<i>Georgia Tech</i>	<i>Atlanta, GA</i>

Ph.D. studies funded by the NASA Energy and Water Cycle Study (NEWS) program; identified and modeled the hydrological impacts (including floods and droughts) of extratropical cyclones over western North America (Advisor: Dr. Yi Deng)

Developed a Matlab-based model to estimate the wind damage associated with landfalling and bypassing hurricanes in a graduate level class that focuses on weather risk (Instructor: Dr. Yi Deng)

Developed a Matlab-based statistical model to quantify the Tobacco loss distribution resulted from extreme weather events for a Chinese agricultural insurance product.

<u>Research Associate</u>	2012
<i>Oak Ridge National Lab</i>	<i>Oak Ridge, TN</i>

Worked on DOE project: "Ultra High Resolution Global Climate Simulation to Explore and Quantify Predictive Skill for Climate Means, Variability and Extremes"; Gained some experience running the global climate model used, while focusing primarily on managing and evaluating high resolution numerical data. (Mentor: Dr. Katherine J. Evans)

<u>Teaching Assistant</u>	2012
<i>Georgia Tech</i>	<i>Atlanta, GA</i>

Designed and developed a module including GUI and data analysis functions in MATLAB for a graduate level fluid dynamics course (Instructor: Rob. X Black).

Graduate Research Associate 2005 - 2008
Peking University Beijing, China
Used the NASA climate model (*GISS ModelE*), to evaluate dynamical coupling between the troposphere and stratosphere. (Advisor: Dr. Yongyun Hu)

Undergrad Research Associate 2004 - 2005
Peking University Beijing, China
Developed a visualization system for a land surface model. Used a combination of MATLAB, FORTRAN and Visual Basic.

Assistant Consultant 2004
CCID Consulting Co., Ltd Beijing, China
Compiled a report detailing the current market for the rubber industry in China.

Awards

Higher Education Research Experiences (HERE) Grant
Oak Ridge National Lab – DOE, 2012

Publications

Koo, J-H., Y. Wang, **T. Jiang**, Y. Deng, S. J. Oltmans, and S. Solberg, 2013: Influence of climate variability on surface ozone depletion events in the Arctic spring. *Nature Geoscience*. (Submitted)

Jiang, T., K. Evans and Y. Deng, 2013: Intermediate Frequency Atmospheric Disturbance s: A Dynamical Bridge Connecting western U.S. Extreme Precipitation with East Asian Cold Surges, *Journal of Climate* (submitted)

Jiang, T., Y. Deng, and W. Li, 2013: Local kinetic energy budget of high-frequency and intermediate-frequency eddies: winter climatology and interannual variability. *Climate Dynamics*. 10.1007/s00382-013-1684-1

Jiang, T. and Y. Deng, 2011: Downstream Modulation of North Pacific Atmospheric River Activity by East Asian Cold Surges. *Geophysical Research Letters*, 38, L20807, doi: 10.1029/2011GL049462.

Deng, Y. and **T. Jiang**, 2011: Intraseasonal Modulation of the North Pacific Storm Track by Tropical Convection in Boreal Winter. *Journal of Climate*, 24, 1122-1137

Dong, X., B. Xi, A. Kennedy, Z. Feng, J. K. Entin, P. R. Houser, R. A. Schiffer, T. L'Ecuyer, W. S. Olson, K. Hsu, W. T. Liu, B. Lin, Y. Deng and **T. Jiang**, 2011: Investigation of the 2006 Drought and 2007 Flood Extremes at the Southern Great Plains Through an Integrative Analysis of Observations. *Journal of Geophysical Research*, 116, D03204, doi: 10.1029/2010JD014776.

Hu, Y., and **T. Jiang**, 2009: GCM Simulations of Early Winter Warming in the Stratospheric Arctic. *Chinese J. Atmos. Sci.* 33 (5), 1058-1070

Presentations

Jiang, T. K Evans, and Y. Deng, 2013: The Role of Atmospheric Rivers in Linking Weather Extremes: East Asian Cold Surges and High Impact Precipitation over the West Coast U.S. , *AGU Meeting of the Americas, Cancun, Mexico, May 2013*

Jiang, T. K Evans, and Y. Deng, 2013: The Role of Atmospheric Rivers in Linking Weather Extremes: East Asian Cold Surge and High Impact Precipitation over the West Coast U.S., *AMS*

annual meeting, Austin, TX, January 2013.

Jiang, T. and Y. Deng, 2011: Dynamical Downstream Modulation of the eastern North Pacific Atmospheric River Activity by East Asian Cold Surge, *AGU Fall meeting, San Francisco, CA, December 2011*

Koo, J.-H., Y. Wang, Y. Deng, **T. Jiang**, S. J. Oltmans, M. Shaw, O. Hermansen, and A. M. Fjaeraa, 2011: Climate variability and tropospheric ozone depletion in the Arctic spring, *AGU Fall meeting, San Francisco, CA, December 2011*

Jiang, T., and Y. Deng, 2010: Dynamical and hydrological fingerprints of the East Asian cold surge over the North Pacific, *AGU fall meeting, San Francisco, CA, December 2010.*

Deng, Y., and **T. Jiang**, 2010: Intraseasonal variability of the cool-season North American coastal cyclonic activity. 22nd conference on climate variability and change/ 90th AMS annual Meeting, *Atlanta, GA, January 2010.*

Deng, Y., and **T. Jiang**, 2009: Subseasonal variability of the North American coastal cyclonic activity: Implications for the winter precipitation and wind extremes. *AGU Joint Assembly, Toronto, ON, Canada, May 2009.*

Highlights:

- “Atmospheric Rivers Go Mainstream”
<http://blog.ametsoc.org/news/atmospheric-rivers-go-mainstream/>

Affiliations

- Member, American Geophysical Union (AGU) since 2008
- Member, American Meteorological Society (AMS) since 2008

Reviewer

- Journal of Applied Meteorology and Climatology
- Journal of Geophysical Research