

Yi Deng

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EDUCATION:

- **Ph.D.** in Atmospheric Sciences, University of Illinois at Urbana-Champaign, Urbana, Illinois, U.S.A., October, 2005
- **M.S.** in Statistics, University of Illinois at Urbana-Champaign, Urbana, Illinois, U.S.A., December, 2004
- **M.S.** in Atmospheric Sciences, University of Illinois at Urbana-Champaign, Urbana, Illinois, U.S.A., August, 2003
- **B.S.** in Atmospheric Sciences, Peking University, Beijing, China, July, 2000
- **B.S.** in Economics, Peking University, Beijing, China, July, 2000

EMPLOYMENT HISTORY:

- **Assistant Professor**, School of Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta, Georgia, U.S.A., August, 2007 – present
- **Research Scientist/Meteorologist**, AIR Worldwide Corporation, Boston, Massachusetts, U.S.A., October, 2006 – August, 2007
- **Postdoctoral Fellow** in Climate Modeling, Institute for Geophysics, University of Texas at Austin, Austin, Texas, U.S.A., October, 2005 – October, 2006
- **Graduate Research Assistant**, Department of Atmospheric Sciences, University of Illinois at Urbana-Champaign, Urbana, Illinois, U.S.A., January, 2001 – October, 2005

RESEARCH INTERESTS:

- Atmospheric instability
- Dynamics of midlatitude storm tracks
- Inverse modeling and model optimization
- Risk modeling of extreme weather events

AWARDS AND HONORS:

- Inducted to Phi Beta Kappa Honor Society, 2005
- Tung OOCL (Orient Overseas Container Line) Scholarship, 1999
- City University of Hong Kong Scholarship, 1997

PROFESSIONAL SERVICE:

Associate Editor

- *Journal of Climate*

Reviewer for the following journals and funding agencies:

- *Journal of the Atmospheric Sciences*

- *Journal of Climate*
- *National Science Foundation*

Convener of the following meeting sessions:

- *Variability and predictability of weather and climate hazards on intraseasonal to interannual time scales*, American Geophysical Union Spring Assembly, Toronto, Ontario, Canada, May 2009.

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

- American Meteorological Society (AMS)
- American Geophysical Union (AGU)

COURSES DEVELOPED AND TAUGHT:

- EAS 4803/8803YD – Introduction to Weather Risk and Catastrophe Modeling
- EAS 4803/8803YD – Atmospheric Dynamics II

PUBLICATIONS:

Peer-Reviewed:

1. Myoung, B. and **Y. Deng**, 2009: Interannual variability of the cyclonic activity along the U.S. Pacific coast: influences on the characteristics of winter precipitation in the western U.S. In Press, *Journal of Climate*.
2. Zhang, H., G. M. McFarquhar, W. R. Cotton, and **Y. Deng**, 2009: Direct and indirect impacts of Saharan dust acting as cloud condensation nuclei on tropical cyclone eyewall development. *Geophysical Research Letters*, 36, L06802, doi: 10.1029/2009GL037276.
3. Jackson, C. S., M. K. Sen, G. Huerta, **Y. Deng**, and K. P. Bowman, 2008: Error reduction and convergence in climate prediction. *Journal of Climate*, 21, 6698-6709.
4. **Deng, Y.**, K. P. Bowman, and C. S. Jackson, 2007: Differences in rain rate intensities between TRMM observations and community atmosphere model simulations, *Geophysical Research Letters*, 34, L01808, doi: 10.1029/2006GL027246.
5. Mak, M., and **Y. Deng**, 2006: Diagnostic and dynamical analyses of two outstanding aspects of storm tracks. *Dynamics of Atmospheres and Oceans*, doi:10.1016/j.dynatmoce.2006.06.004.
6. **Deng, Y.**, and M. Mak, 2006: Nature of the differences in the intraseasonal variability of the Pacific and Atlantic storm tracks: A diagnostic study. *Journal of the Atmospheric Sciences*, 63, 2602-2615.
7. **Deng, Y.**, and M. Mak, 2005: An idealized model study relevant to the dynamics of the mid-winter minimum of the Pacific storm track. *Journal of the Atmospheric Sciences*, 62, 1209-1225.
8. Qian, W., **Y. Deng**, Y. Zhu and W. Dong, 2002: Demarcating the worldwide monsoon. *Theoretical and Applied Climatology*, 71, 1-16.
9. Qian, W., H. Hu, **Y. Deng** and J. Tian, 2002: Signals of interannual and interdecadal variability of air-sea interaction in the basin-wide Indian Ocean. *Atmosphere-Ocean*, 40 (3), 293-311.

Non-Peer-Reviewed:

10. **Deng, Y.**, 2005: A diagnostic and dynamical study of the midwinter minimum of the Pacific storm track. [Ph.D. Dissertation]: Urbana, University of Illinois at Urbana-Champaign, 114p.
11. **Deng, Y.**, 2003: Midwinter minimum of storm track: a linear instability perspective. [Master Thesis]: Urbana, University of Illinois at Urbana-Champaign, 87p.

SEMINARS:

1. *A diagnostic and dynamical study of the midwinter minimum of the Pacific storm track & stochastic Bayesian inversion method in estimating parametric uncertainties in climate models*, Department of Atmospheric and Oceanic Sciences, University of Colorado at Boulder, Boulder, CO, U.S.A., March 2007
2. *A diagnostic and dynamical study of the midwinter minimum of the Pacific storm track & stochastic Bayesian inversion method in estimating parametric uncertainties in climate models*, School of Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA, U.S.A., March 2007
3. *Has it ever rained cats and dogs in a climate model?* Institute for Geophysics, University of Texas at Austin, Austin, TX, U.S.A., February 2006
4. *A diagnostic and dynamical study of the midwinter minimum of the Pacific storm track*, Department of Atmospheric Sciences, University of Illinois at Urbana-Champaign, Urbana, IL, U.S.A., September 2005
5. *A diagnostic and dynamical study of the midwinter minimum of the Pacific storm track*, Department of Atmospheric Sciences, Texas A&M University, College Station, TX, U.S.A., March 2005
6. *Midwinter minimum of storm track: a linear instability perspective*, Department of Atmospheric Sciences, University of Illinois at Urbana-Champaign, Urbana, IL, U.S.A., April 2003

CONFERENCE PRESENTATIONS:

1. **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.
2. Huang, X., and **Y. Deng**, 2009: *The role of Great Lakes in simulating winter temperature of the Midwest: a large-scale modeling perspective*. AGU Joint Assembly, Toronto, ON, Canada, May 2009.
3. **Deng, Y.**, and B. Myoung, 2009: *Interannual variability of the west coast cyclone landfall and its influences on the western US winter precipitation*. 21st conference on climate variability and change / 89th AMS Annual Meeting, Phoenix, AZ, January 2009.
4. **Deng, Y.**, and B. Myoung, 2008: *Observed interannual variability of the cyclone landfall pattern along the US Pacific coast: tropical influences and implications*

- for the winter precipitation extremes in the western US.* AGU fall meeting, San Francisco, CA, December 2008.
5. **Deng, Y.**, and P. Sousounis, 2007: *Introduction to the AIR China typhoon loss estimation model*, AIR Worldwide Corporation 2007 Beijing Seminar, Beijing, China, May 2007.
 6. **Deng, Y.**, and C. Jackson, 2007: *Influence of climate model cloud and convection parameter uncertainties on present and future simulated precipitation extremes.* 19th conference on climate variability and change / 87th AMS Annual Meeting, San Antonio, TX, January 2007.
 7. Jackson, C., **Y. Deng**, G. Huerta and M. Sen, 2006: *Preliminary calculation of an upper bound to climate prediction skill.* AGU fall meeting, San Francisco, CA, December 2006.
 8. **Deng, Y.**, and C. Jackson, 2006: *Differences in rain rate intensities between TRMM observations and community atmosphere model simulations.* 11th Annual CCSM workshop, Breckenridge, CO, June 2006.
 9. **Deng, Y.**, and M. Mak, 2005: *Nature of the differences in the intraseasonal variability of the Pacific and Atlantic storm tracks: A diagnostic study.* 15th conference on atmosphere and oceanic fluid dynamics, Cambridge, MA, June 2005.
 10. Mak, M., and **Y. Deng**, 2004: *A diagnostic and dynamical study of the mid-winter minimum of the Pacific storm track.* Global circulation of the atmosphere conference, Pasadena, CA, November 2004.
 11. Mak, M., and **Y. Deng**, 2003: *Wave-packet resonance: atmospheric storm tracks dynamics.* International union of geodesy and geophysics, Sapporo, Japan, July 2003.
 12. **Deng, Y.**, and M. Mak, 2003: *Why is there mid-winter minimum of storm tracks?* 14th conference on atmospheric and oceanic fluid dynamics, San Antonio, TX, June 2003.