



Wenchang Yang

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Research Interests

Arctic Climate, East African Hydroclimate and Drought

Climate Variability, Climate Dynamics, Climate Change, Extreme Weather and Climate

ITCZ, Global Monsoons, Storm Tracks, Idealized Climate Models

Education

2014 Ph.D., Columbia University

Thesis: *The Hydroclimate of East Africa: Seasonal cycle, Decadal Variability, and Human-induced Climate Change*. Advisors: Prof. Richard Seager and Prof. Mark A. Cane

2007 M.S., Peking University, China

2004 B.S., Peking University, China

Employment

2017 Dec – , Postdoctoral Research Associate, Princeton University

2015 Jan – 2017 Nov, Postdoctoral Scholar, University of California at Irvine

Publications

2017 **Yang, W.**, G. Magnusdottir (2017): Springtime Extreme Moisture Transport into the Arctic and its Impact on Sea Ice Concentration. *J. Geophys. Res. Atmos.*, **122**, 5316–5329, doi: 10.1002/2016JD026324

2016 **Yang, W.**, G. Magnusdottir (2016): Interannual Signature in Daily ITCZ States in the East Pacific in Boreal Spring, *J. Clim.*, **29**, 8013–8025, doi: 10.1175/JCLI-D-16-0395.1

2015 **Yang, W.**, R. Seager, M. A. Cane, and B. Lyon (2015): The Rainfall Annual Cycle Bias over East Africa in CMIP5 Coupled Climate Models. *J. Clim.*, **28**, 9789–9802, doi: 10.1175/JCLI-D-15-0323.1

Yang, W., R. Seager, M. A. Cane, and B. Lyon (2015): The Annual Cycle of the East African Precipitation. *J. Clim.*, **28**, 2385–2404, doi: 10.1175/JCLI-D-14-00484.1

2014 **Yang, W.**, R. Seager, M. A. Cane, and B. Lyon (2014): The East African Long Rains in Observations and Models. *J. Clim.*, **27**, 7185–7202, doi: 10.1175/JCLI-D-13-00447.1

2013 **Yang, W.**, R. Seager, and M. A. Cane (2013): Zonal Momentum Balance in the Tropical Atmospheric Circulation During the Global Monsoon Mature Months. *J. Atmos. Sci.*, **70**, 583–599, doi: 10.1175/JAS-D-12-0140.1

2008 Nie, J., P. Wang, **W. Yang**, and B. Tan (2008): Northern Hemisphere Storm Tracks in Strong AO Anomaly Winters. *Atmos. Sci. Lett.*, **9**, 153–159, doi: 10.1002/asl.186

2007 **Yang, W.**, J. Nie, P. Lin, and B. Tan (2007): Baroclinic Wave Packets in an Extended Quasi-geostrophic Two-layer Model. *Geophys. Res. Lett.*, **34**, L05822, doi: 10.1029/2006GL029077

Manuscripts

2017 **Yang, W.**, G. Magnusdottir (2017): Year-to-year Sea Ice Extent Minimum Variability and its Preconditions in Spring and Summer. **in review**

Teaching Experience

2009 Fall, Teaching Assistant (with John Sawicki), Columbia University
Quantitative Models of Climate-Sensitive Natural and Human Systems
Instructors: Prof. Mingfang Ting and Prof. Anthony G. Barnston

2008 Fall, Teaching Assistant (with Daniel Ruiz Carrascal), Columbia University
Quantitative Models of Climate-Sensitive Natural and Human Systems
Instructors: Prof. Mingfang Ting and Prof. Anthony G. Barnston

2006 Spring, Teaching Assistant, Peking University, China
Atmospheric Dynamics
Instructor: Prof. Benkui Tan

Presentations

2016 Dec 16, American Geophysical Union Fall Meeting, San Francisco
Springtime Extreme Moisture Transport into the Arctic - Its Impact and Associated Large-scale Atmospheric circulation

Jun 08, AOS Seminar, Peking University
Decadal Variability of East African Hydroclimate in Observations and Models and the Implication for the Future Projection

2015 Dec 14 (poster), American Geophysical Union Fall Meeting, San Francisco
The East Pacific Double ITCZ during Boreal Spring in Observations.

2014 Oct 27, Columbia University PhD Thesis Defense, Seismology Room at Lamont.
The Hydroclimate of East Africa: Seasonal cycle, Decadal Variability, and Human-induced Climate Change

Sep 25, AOCD Seminar, Yale University
Why is East Africa Drying during the Spring Rainy Season in Recent Decades?

Jun 04, GFDL Seminar, Princeton University
East African Precipitation and Droughts: from Decadal Variability to Annual Cycle

May 28, GloDecH Meeting, Columbia University
The Dual Peaked Seasonal Cycle of Precipitation Over Tropical East Africa

- 2013 Dec 9-13 (poster), American Geophysical Union Fall Meeting, San Francisco
The East African Long Rains in Observations and Models
- Jun 12, GloDecH Meeting, Columbia University
Decadal Variability of the East African Long Rains in Obs. and Models
- 2012 Dec 3-7 (poster), American Geophysical Union Fall Meeting, San Francisco
Zonal Momentum Balance in the Tropical Atmospheric Circulation during the Global Monsoon Mature Months
- 2011 Dec 5-9 (poster), American Geophysical Union Fall Meeting, San Francisco
Simulating and Diagnosing the Dynamics of the Global Monsoon in a Simple Tropical Atmosphere Model
- Jun 20, Atmosphere-Ocean Science Days, MIT
Global Monsoon Simulation in a Simple Numerical Model
- 2009 Apr 09, Columbia University Graduate Oral Meeting
Trends and Patterns of Different Monsoons over the Period of 1979–2007
- 2007 May 26, Peking University M.S. Thesis Defence Meeting
Baroclinic Wave Packets in an Extended Quasi-geostrophic Two-layer Model
- 2007 Apr 19, Peking University Graduate Student Research Meetings
A Numerical Solution to the Quasi-geostrophic Two-layer Model

Professional Services

Journal Reviews

Nature Climate Change, Scientific Reports, Climate Dynamics
Journal of Climate, Journal of the Atmospheric Sciences
Geophysical Research Letters, Journal of Geophysical Research-Atmospheres
Quarterly Journal of the Royal Meteorological Society, International Journal of Climatology
Journal of Applied Meteorology and Climatology, Advances in Atmospheric Sciences

Other Services

2015 Judge for the Outstanding Student Paper Awards in the AGU Fall Meeting
2010 – 2011, Coordinator for the Division of Ocean and Climate Physics Seminars at Lamont,
Columbia University

Professional Associations

Member of the American Geophysical Union (AGU)
Member of the American Meteorology Society (AMS)

Awards and Honors

2007 Faculty Fellowship of GSAS, Columbia University
Second Prize in “Zhong Shengbiao Education Foundation” Student Academic Forum
2005 May 4th Scholarship

- 2004 Graduate of All Universities in Beijing City with Highest Honors
Graduate of Peking University with Highest Honors
- 2002 Triple-A Student of Peking University
- 2001 Triple-A Student of Peking University
- 2001 – 2004, Cyrus Tang Foundation Scholarship
- 2000 Triple-A Student of High Schools in Jiangsu Province, China
- 1999 First Prize in National High School Mathematics Olympiad, Jiangsu, China
Second Prize in National High School Biology Olympiad, Jiangsu, China
Third Prize in National High School Physics Olympiad, Jiangsu, China