

Wenchang Yang

Postdoctoral Scholar

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Research Interests

Arctic Climate Variability, Moisture Transport

Regional Hydroclimate, Drough Dynamics, East African Climate

ITCZ, Global Monsoons, Storm Tracks, Idealized Climate Models

Education

2014 Ph.D. in Atmospheric Sciences, 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

2011 M.Phil., Columbia University

2007 M.S., Peking University, China. Advisor: Prof. Benkui Tan

2004 B.S., Peking University, China

Publications

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 Quasigeostrophic Two-layer Model. *Geophys. Res. Lett.*, **34**, L05822, doi: 10.1029/2006GL029077

Manuscripts

- 2017 **Yang, W.**, G. Magnusdottir (2017): Springtime Moisture Transport and September Arctic Sea Ice in Observations and Models. **in preparation**
- 2017 **Yang, W.**, G. Magnusdottir (2017): Springtime Extreme Moisture Transport into the Arctic through the Atlantic Pathway. *J. Geophys. Res. Atmos.*, **in revision**

Research Experience

- 2015 Jan – Present, Postdoctoral Scholar, University of California, Irvine
Advisor: Prof. Gudrun Magnusdottir
- 2014 Nov – 2014 Dec, Postdoc, Columbia University
Advisor: Dr. Bradfield Lyon
- 2007 Sep – 2014 Oct, Research Assistant, Columbia University
Advisors: Prof. Richard Seager and Prof. Mark A. Cane
- 2004 Sep – 2007 Jun, Research Assistant, Peking University, China
Advisor: Prof. Benkui Tan

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
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
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

Why is East Africa Drying during the Spring Rainy Season in Recent Decades?

Jun 04, GFDL Seminar, GFDL, Princeton

East African Precipitation and Droughts: from Decadal Variability to Annual Cycle

May 28, GloDecH Meeting, Lamont

The Dual Peaked Seasonal Cycle of Precipitation Over Tropical East Africa

2013 Oct 9-13 (poster), American Geophysical Union Fall Meeting

The East African Long Rains in Observations and Models

Jun 12, GloDecH Meeting

Lamont Decadal Variability of the East African Long Rains in Obs. and Models

2012 Dec 3-7 (poster), American Geophysical Union Fall Meeting

Zonal Momentum Balance in the Tropical Atmospheric Circulation during the Global Monsoon Mature Months

2011 Dec 5-9 (poster), American Geophysical Union Fall Meeting

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, Lamont 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, Graduate Student Research Meetings, Department of AOS, Peking University

A Numerical Solution to the Quasi-geostrophic Two-layer Model

Professional Service

Journal Reviews

Nature Climate Change, 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

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 Outstanding Graduate of All Universities in Beijing City
 - Outstanding Graduate of Peking University
- 2002 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

References Available to Contact

- Dr. Richard Seager
 - Palisades Geophysical Institute/Lamont Research Professor
 - Lamont-Doherty Earth Observatory, Columbia University
 - Email: seager@ldeo.columbia.edu
 - Phone: +1 (845) 365-8743
 - Address: 104D Oceanography, PO Box 1000, 61 Route 9W, Palisades, NY 10964-8000, US
- Dr. Mark A. Cane
 - G. Unger Vetlesen Professor
 - Department of Earth and Environmental Sciences, Columbia University
 - Email: mcane@ldeo.columbia.edu
 - Phone: +1 (845) 365-8344
 - Address: 105B Oceanography, PO Box 1000, 61 Route 9W, Palisades, NY 10964-8000, US
- Dr. Bradfield Lyon
 - Associate Research Professor
 - University of Maine
 - Email: bradfield.lyon@maine.edu
 - Phone: +1 (207) 581-2241
 - Address: 210 Sawyer Environmental Research Center, Orono, ME 04469, US
- Dr. Mingfang Ting
 - Lamont Research Professor
 - Lamont-Doherty Earth Observatory, Columbia University
 - Email: ting@ldeo.columbia.edu
 - Phone: +1 (845) 365-8157
 - Address: 104C Oceanography, PO Box 1000, 61 Route 9W, Palisades, NY 10964-8000, US
- Dr. William Boos

Associate Professor

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Dr. Gudrun Magnúsdóttir

Professor

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