

Dargan M. W. Frierson

CONTACT INFORMATION	Dept. of Atmospheric Sciences Box 351640 Seattle, WA 98195-1640	<i>E-mail:</i> dargan@atmos.washington.edu <i>Phone:</i> (206) 685-7364 <i>Website:</i> http://www.atmos.washington.edu/~dargan
RESEARCH INTERESTS	Atmospheric general circulation, water vapor, climate change	
EMPLOYMENT	University of Washington , Department of Atmospheric Sciences Assistant Professor, September 2007-present University of Chicago , Department of Geophysical Sciences NOAA Climate and Global Change Postdoctoral Fellow, September 2005-August 2007 <ul style="list-style-type: none">• Host: Raymond T. Pierrehumbert	
EDUCATION	Princeton University , Princeton, New Jersey, 2000-2005 Ph.D., Applied Mathematics, December 2005 <ul style="list-style-type: none">• Dissertation Topic: "Studies of the General Circulation of the Atmosphere with a Simplified Moist General Circulation Model"• Advisor: Isaac M. Held, Geophysical Fluid Dynamics Laboratory M.S., Applied Mathematics, May 2002 North Carolina State University , Raleigh, North Carolina, 1996-2000 B.S., Mathematics and Physics, with minors in English and Italian, May 2000 <ul style="list-style-type: none">• 4.0 GPA• Valedictorian	
HONORS AND AWARDS	NOAA Climate and Global Change Postdoctoral Fellowship, 2005-2007. National Science Foundation Graduate Research Fellowship, 2000-2003 NCSU College of Physical and Mathematical Sciences Scholarly Achievement Award, spring 2000. NCSU College of Physical and Mathematical Sciences Research Award, spring 2000.	
PUBLISHED WORK	Chen, G., Lu, J. and D. M. W. Frierson. Phase Speed Spectra and the Latitude of Surface Westerlies: Interannual Variability and Global Warming Trend. In press, <i>J. Climate</i> . Lu, J., Chen, G., and D. M. W. Frierson. Response of the Zonal Mean Atmospheric Circulation to El Niño versus Global Warming. In press, <i>J. Climate</i> . Pauluis, O. M., Frierson, D. M. W., and A. J. Majda. Precipitation Fronts and the Reflection and Transmission of Tropical Disturbances. In press, <i>Q. J. Roy. Met. Soc.</i> Kang, S. M., Held, I. M., Frierson, D. M. W. and M. Zhao. The Response of the ITCZ to Extratropical Forcing: Idealized Slab Ocean Experiments with a GCM. In press, <i>J. Climate</i> . Frierson, D. M. W. Midlatitude Static Stability in Simple and Comprehensive General Circulation Models. <i>J. Atmos. Sci.</i> , 65, 1049-1062, 2008.	

Lin, J.-L., Lee, M.-I., Kim, D., Kang, I.-S., and D. M. W. Frierson. The Impacts of Convective Parameterization and Moisture Triggering on AGCM-Simulated Convectively Coupled Equatorial Waves. *J. Climate*, 21, 883-909, 2008.

Frierson, D. M. W., Lu, J. and G. Chen. The Width of the Hadley Circulation in Simple and Comprehensive General Circulation Models. *Geophys. Res. Lett.*, 34, L18804, doi: 10.1029/2007GL031115, 2007.

Frierson, D. M. W. Convectively Coupled Kelvin Waves in an Idealized Moist General Circulation Model. *Journal of the Atmospheric Sciences*, 64, 2076-2090, 2007.

Garner, S. T., Frierson, D. M. W., Held, I. M., Pauluis, O. M. and G. K. Vallis. Resolving Convection in a Global Hypohydrostatic Model. *Journal of the Atmospheric Sciences*, 64, 2061-2075, 2007.

Frierson, D. M. W. The Dynamics of Idealized Convection Schemes and Their Effect on the Zonally Averaged Tropical Circulation. *Journal of the Atmospheric Sciences*, 64, 1959-1976, 2007.

Frierson, D. M. W., Held, I. M. and P. Zurita-Gotor. A Gray-Radiation Aquaplanet Moist GCM. Part II: Energy Transports in Altered Climates. *Journal of the Atmospheric Sciences*, 64, 1680-1693, 2007.

Frierson, D. M. W. Robust Increases in Midlatitude Static Stability in Global Warming Simulations. *Geophysical Research Letters*, 33, L24816, doi:10.1029/2006GL027504, 2006.

Mitchell, J. L., Pierrehumbert, R. T., Frierson, D. M. W., and R. Caballero. The Dynamics Behind Titan's Methane Clouds. *Proceedings of the National Academy of Sciences*, 103, 18421-18426, 2006.

Pauluis, O. M., Frierson, D. M. W., Garner, S. T., Held, I. M., and G. K. Vallis. The Hypo-hydrostatic Rescaling and Its Impacts on Modeling of Atmospheric Convection. *Theoretical and Computational Fluid Dynamics*, 20, 485-499, 2006.

Frierson, D. M. W., Held, I. M. and P. Zurita-Gotor. A Gray-Radiation Aquaplanet Moist GCM. Part I: Static Stability and Eddy Scales. *Journal of the Atmospheric Sciences*, 63, 2458-2566, 2006.

Frierson, D. M. W., Majda, A. J. and O. M. Pauluis. Large Scale Dynamics of Precipitation Fronts in the Tropical Atmosphere: A Novel Relaxation Limit. *Communications in Mathematical Sciences*, 2, 605-640, 2004.

Blondin, J. M., Chevalier, R. A. and D. M. Frierson. Pulsar Wind Nebulae in Evolved Supernova Remnants. *Astrophysical Journal*, 563, 806-815, 2001.

SUBMITTED

Mitchell, J. L., Pierrehumbert, R. T., Frierson, D. M. W., and R. Caballero. The impact of methane thermodynamics on seasonal cloud distributions and circulation in a model Titan atmosphere. Submitted to *Icarus*.

INVITED LECTURES

NYU Center for Atmosphere Ocean Science Colloquium, April 2005.

NCAR IMAGE Workshop on Multi-scale Interactions in a GCM Grid Box, November 2005.

Columbia University IGERT Joint Program Colloquium, February 2006.

University of Washington Clouds and Precipitation Seminar, April 2006.

NCAR IMAGE Workshop on Multiscale Processes for Low Frequency Variability, Climate, and Cli-

mate Change Response, May 2006.

NYU Center for Atmosphere Ocean Science Colloquium, December 2006.

University of Washington Climate Dynamics Seminar, February 2007.

Stony Brook University Institute of Terrestrial and Planetary Atmospheres Seminar, February 2007.

Colorado State University Department of Atmospheric Science Colloquium, April 2007.

University of Washington Atmospheric Sciences Colloquium, November 2007.

Princeton University Program in Applied and Computational Mathematics Colloquium, November 2007.

MIT MASS Seminar, April 2008.

Oregon State University Mathematics Colloquium, June 2008.

SIAM Minisymposium on Tropical Convection, Waves, and Large Scale Dynamics, July 2008.

TEACHING/
COMMUNITY
OUTREACH
EXPERIENCE

Guest Lecturer, Scholars in the Schools Program

2002 - 2004

Giving talks to elementary school students (K-5th grades) about weather and climate. Spoke at more than 15 schools to over 1000 students.

Coach, Princeton Charter School MathCounts Team

2000 - 2003

A weekly practice preparing middle school students for a math competition.

ACADEMIC SERVICE

Reviewer for Journal of the Atmospheric Sciences, Journal of Climate, Geophysical Research Letters, Quarterly Journal of the Royal Meteorological Society, Tellus A, Dynamics of Atmospheres and Oceans, Proceedings of the National Academy of Sciences, Atmospheric Science Letters, and the National Science Foundation.