

JIANJUN YIN

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EDUCATION

Ph.D, University of Illinois at Urbana-Champaign; Postdoc, Princeton University/GFDL

RESEARCH INTERESTS

- Past and future climate changes, abrupt climate change
- Atlantic meridional overturning circulation and the role of the ocean in the climate system
- Impact of climate change on the Earth's environment, natural systems, economy and society
- Development and applications of simple, intermediate and complex climate models

RESEARCH EXPERIENCE

Assistant Scholar Scientist (2006~present), Center for Ocean-Atmospheric Prediction Studies, Florida State University

Postdoctoral Research Associate (2004~2006), Program in Atmospheric and Oceanic Sciences, Princeton University; Geophysical Fluid Dynamics Laboratory, NOAA

Research Assistant (1999~2004), Department of Atmospheric Sciences, University of Illinois at Urbana-Champaign

Research Assistant (1996~1999), Chinese Academy of Meteorological Sciences, Beijing

PUBLICATIONS

- **Yin, J.**, E. P. Chassignet, W. G. Large, N. J. Norton, A. J. Wallcraft, and S. G. Yeager, 2009: Salinity boundary conditions and the Atlantic meridional overturning circulation in depth and quasi-isopycnic coordinate global ocean models. *Ocean Modelling*. (submitted)
- **Yin, J.**, R. J. Stouffer, M. J. Spelman, and S. M. Griffies, 2009: Evaluating the uncertainty induced by the virtual salt flux assumption in climate simulations and future projections. *Journal of Climate*, in press, doi:10.1175/2009JCLI3084.1.
- Done, J., A. Hu, E. C. Farmer, **J. Yin**, S. Bates, A. B. Frappier, D. J. Halkides, K. H. Kilbourne, R. Srivier, J. Woodruff, 2009: The thermohaline circulation and tropical cyclones in past, present, and future climates. *Bulletin of the American Meteorological Society*, in press, doi: 10.1175/2009BAMS2762.1.
- Hu, A., G. A. Meehl, W. Han, and **J. Yin**, 2009: Transient response of the MOC and climate to potential melting of the Greenland ice sheet in the 21st century. *Geophys. Res. Lett.*, 36, L10707, doi:10.1029/2009GL037998.
- **Yin, J.**, M. E. Schlesinger, and R. J. Stouffer, 2009: Model projections of rapid sea-level rise on the northeast coast of the United States. *Nature Geoscience*, 2, 262-266, doi: 10.1038/NCEO462.

- Griffies, S. M., A. Biastoch, C. Boning, F. Bryan, G. Danabasoglu, E. P. Chassignet, M. H. England, R. Gerdes, H. Haak, R. W. Hallberg, W. Hazeleger, J. Jungclaus, W. G. Large, G. Madec, B. L. Samuels, M. Scheinert, C. A. Severijns, H. L. Simmons, A. M. Treguier, M. Winton, S. Yeager, and **J. Yin**, 2009: Coordinated Ocean-ice Reference Experiments (COREs), *Ocean Modelling*, **26**, 1–46.
- Timmermann, A., S. I. An, A. Clement, E. Guilyardi, J. Jungclaus, A. Hu, M. Renold, T. F. Stocker, R. J. Stouffer, S. P. Xie, and **J. Yin**, 2007: The influence of a shutdown of the Atlantic meridional overturning circulation on ENSO. *Journal of Climate*, **20**, 4899-4919.
- **Yin, J.**, and R. J. Stouffer, 2007: Comparison of the stability of the Atlantic thermohaline circulation in two coupled atmosphere-ocean general circulation models. *Journal of Climate*, **20**, 4293-4315.
- Stouffer, R. J., **J. Yin**, J. M. Gregory, K. W. Dixon, M. J. Spelman, W. Hurlin, A. J. Weaver, M. Eby, G. M. Flato, H. Hasumi, A. Hu, J. H. Jungclaus, I. V. Kamenkovich, A. Levermann, M. Montoya, S. Murakami, S. Nawrath, A. Oka, W. R. Peltier, D. Y. Robitaille, A. Sokolov, G. Vettoretti, S. L. Weber, 2006: Investigating the Causes of the Response of the Thermohaline Circulation to Past and Future Climate Changes. *Journal of Climate*, **19**, 1365-1387.
- **Yin, J.**, M. E. Schlesinger, N. G. Andronova, S. Malyshev, and B. Li, 2006: Is a shutdown of the thermohaline circulation irreversible?, *J. Geophys. Res.*, *111*, D12104, doi:10.1029/2005JD006562.
- Schlesinger, M. E., **J. Yin**, G. Yohe, N. G. Andronova, S. Malyshev, B. Li, 2006: Assessing the Risk of a Collapse of the Atlantic Thermohaline Circulation. In *Avoiding Dangerous Climate Change*, Schellnhuber, J., Cramer, W., Nakicenovic, N., Wigley, T. and Yohe, G., (Editors) CPU.

PRESENTATIONS

- **Yin, J.**, Simulating the Atlantic Meridional Overturning Circulation with HYCOM and POP. The 13th Annual CCSM Workshop, Breckenridge, CO, June, 2008.
- **Yin, J.**, The Thermohaline Circulation and Tropical Cyclones in Past, Present and Future Climates. 2008 ECSA Junior Faculty Forum on Future Scientific Directions, NCAR ASP, July, 2008 (organizer).
- **Yin, J.**, Climate Simulations with CCSM3/HYCOM. The Climate Change Prediction Program meeting, Department of Energy, Indianapolis, IN, September, 2007.
- **Yin, J.**, CORE integrations with CCSM3/HYCOM. The 12th Annual CCSM Workshop, Breckenridge, CO, June, 2007.
- **Yin, J.**, Numerical Ocean and Climate Modeling. The Second Oceanography Symposium, Tallahassee, FL, November, 2007.
- **Yin, J.**, Climate Simulations with CCSM3/HYCOM. The Climate Change Prediction Program, Department of Energy, Indianapolis, IN, September, 2007.
- **Yin, J.**, CORE Integrations with CCSM3/HYCOM. The 12th Annual CCSM Workshop, Breckenridge, CO, June, 2007.
- **Yin, J.**, Role of the Thermohaline Circulation in Past and Future Climate Changes. University of Michigan, MI, February, 2006.
- **Yin, J.**, Does GFDL CM2 Have Multiple Climate Equilibrium States? Geophysical Fluid Dynamics Laboratory, June, 2006.
- **Yin, J.**, CMIP/PMIP “Water-Hosing” Experiments. 86th AMS Annual Meeting, Atlanta, GA, January, 2006.
- **Yin, J.**, Investigating the Causes of the Response of the Thermohaline Circulation to Past and Future Climate Changes. 2005 AGU Fall Meeting, San Francisco, CA, December, 2005.

- **Yin, J.**, Results from the CMIP/PMIP Coordinated Experiments. Conference of Cooperative Institute for Climate Applications and Research (CICAR), Lamont-Doherty Earth Observatory at Columbia University, May, 2005.
- **Yin, J.**, Coupled Model Intercomparison about the Climate Changes Induced by a Slowdown/Shutdown of the Thermohaline Circulation, Seminar Series of Geophysical Fluid Dynamics Laboratory, National Oceanic and Atmospheric Administration, Princeton, February, 2005.
- **Yin, J.**, Distinct Dynamical Properties of the Thermohaline Circulation Simulated by Different Hierarchies of Models, Department of Atmospheric Sciences, University of Illinois at Urbana-Champaign, 2004.
- **Yin, J.**, Is a Shutdown of the Thermohaline Circulation Irreversible? Geophysical Fluid Dynamics Laboratory, National Oceanic and Atmospheric Administration, Princeton, July, 2004.

RESEARCH GRANTS

US Department of Energy, 2007-2011: Incorporation of the HYbrid Coordinate Ocean Model (HYCOM) into the Community Climate System Model (CCSM): Evaluation and Climate Applications. \$700,000 (with Dr. Eric Chassignet).