

Anji Seth

CONTACT INFORMATION

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RESEARCH INTERESTS

Regional climate variability and change; Climate modelling;
Interactions of societies with climate.

EDUCATION

University of Michigan, Ann Arbor, MI, USA
Ph.D., Atmospheric Sciences, 1995

Worcester Polytechnic Institute, Worcester, MA, USA
B.S., Mechanical Engineering, 1985

PROFESSIONAL HISTORY

Research Assistant Professor, 2005-present,
University of Connecticut, Department of Geography, Storrs, CT.
Associate Research Scientist, 1999-2005,
Columbia University, IRI, Palisades, NY.
Visiting Scientist, December 1997–1999,
National Center for Atmospheric Research, Boulder, CO.
Research Associate, 1997,
University of Arizona, Institute of Atmospheric Physics, Tucson, AZ.
Post-Doctoral Fellow, 1995–1997,
National Center for Atmospheric Research, Boulder, CO.
Graduate Research Fellow, Advanced Study Program, 1991–1994,
National Center for Atmospheric Research, Boulder, CO.
Analytical Engineer, 1986–1988,
United Technologies Corp., Hamilton Standard, Windsor Locks, CT.

GRANTS, FELLOWSHIPS

Seth, A. (PI): Evaluating recent and projected climate variability in the Andean Highlands: a subaward to Adapting to change in the Andean Highlands: Practices and strategies to address climate and market risks in vulnerable agro-ecosystems, USAID/SANREM-CRSP, \$105,000, 2006-2010.
Seth, A. (PI), B. Liebmann, S. Camargo: The predictability of onset and character of warm season rains in tropical South America using a nested modeling system, NOAA Pan American Climate Studies (PACS), \$160,000, 2002-2005.
Seth, A. (PI), A study of seasonal rainfall predictability for tropical South America using a nested modeling system, NOAA Pan American Climate Studies (PACS), \$300,000, 1998-2001.
Graduate Research Fellowship, Advanced Study Program, National Center for Atmospheric Research (NCAR), 1991-1994.

TEACHING

University of Connecticut, Storrs, CT, USA
Course Development, Instruction GEOG 105, Weather, Climate and Environment, Spring 2006 - ongoing.
Course Development, Instruction, GEOG/GEOL 1000, Global Change and Natural Disasters, June 2006 - June 2008. University Provost Grant to develop new interdisciplinary course, with Melinda Daniels (Geography) and Tim Byrne (Geology).

- COLLABORATIONS, MENTORING *Regional climate variability and change* Filippo Giorgi Jeremy Pal, Sara Rauscher (ICTP), Joshua Qian, Suzana Camargo (Columbia U), Maisa Rojas (U Chile), Brant Liebmann (NOAA/CDC), Robert DeConto (U Mass), David Pollard (Penn State).
Climate society interactions Dana Fisher (Columbia U), Corinne Valdivia (U Missouri), Magali Garcia (UMSA, Bolivia).
Mentoring Honors Students, thesis advisor (1); PhD Students, primary advisor (1), committee member(3); Post-Doctoral Researchers, primary advisor (2); Summer Interns, primary advisor (3).
- PROFESSIONAL ACTIVITIES *Ad-Hoc Review Panel* NOAA Climate Program Office, Fall 2007, Fall 1998
Member CLIVAR VAMOS MESA International Science Working Group.
Member AMS Committee on Meteorology and Oceanography of the Southern Hemisphere.
Member AMS, AGU, AAG. *Reviewer* NOAA, NASA, NSF.
Reviewer Journal of Climate, Journal of Hydrometeorology, Monthly Weather Review, Bulletin of the AMS, Journal of Geophysical Research, Geophysical Research Letters, Climate Dynamics.
- MANUSCRIPTS IN PRESS Rauscher, S., A. Seth, B. Liebmann, J.-H. Qian, and S. Camargo, 2007: Subseasonal statistics from a regional model climatology for South America: Rainy season onset, dry and wet spells, *Monthly Weather Review*, in press.
- PUBLICATIONS Liebmann, B., S. Camargo, J. Marengo, C. Vera, A. Seth, L. Carvalho, D. Allured, R. Fu, 2007: Onset and End of the Rainy Season in South America in Observations and an Atmospheric General Circulation Model, *Journal of Climate*, **20**, 2037–2050.
- Seth, A., S. Rauscher, S. Camargo, J.-H. Qian, and J. Pal, 2006: RegCM regional climatologies for South America using reanalysis and ECHAM model global driving fields, *Climate Dynamics*, DOI 10.1007/s00382-006-0191-z.
- Meehl, G. A., J. M. Arblaster, D. Lawrence, A. Seth, E.K. Schneider, B.P. Kirtman, and D. Min, 2006: Monsoon regimes in CCSM3, *Journal of Climate*, **19**, 2482–2495.
- Rauscher, S., A. Seth, J. Qian, and S. Camargo, 2006: Regional climate model domain choice in the tropics based on process considerations, *Theoretical and Applied Climatology*, doi:10.1007/s00704-006-0206-z.
- Landman, W., A. Seth and S. Camargo, 2005: The effect of regional climate model domain choice on the Simulation of tropical cyclone-like vortices in the Southwestern Indian Ocean, *Journal of Climate*, **18**, 1263–1274.
- Seth, A., M. Rojas, B. Liebmann, and J. Qian, 2004: Daily rainfall analysis for South America from a regional climate model and station observations, *Geophysical Research Letters*, **31**, L07213, doi:10.1029/2003GL019220.
- Qian, J.-H., A. Seth and S. Zebiak, 2003: Reinitialized versus Continuous Simulations for Regional Climate Downscaling, *Monthly Weather Review*, **131**, 2857–2873.
- Seth, A. and M. Rojas, 2003: Simulation and sensitivity in a nested modeling system for tropical South America. Part I: Reanalyses boundary forcing, *Journal of Climate*, **16**, 2437–2453.
- Rojas, M. and A. Seth, 2003: Simulation and sensitivity in a nested modeling system for tropical South America. Part II: GCM boundary forcing, *Journal of Climate*, **16**, 2454–2471.
- Waple, A.M., and J.H. Lawrimore, editors. L. Alexander, B. Horton, P. Ambenje, G. Bell, M. Halpert, O.N. Bulygina, N.N. Korshunova, V.N. Razuvaev, S.J. Camargo, B. Lyon, A. Seth, J. Christy, A. Douglas, K. Gleason, J.H. Lawrimore, M. Menne, A. Waple, D. Hardy, C. McBride, D. Phillips, R. Pielke Sr., C.L. Castro, D. Robinson, J. Salinger, R. Schnell, A. Watkins, 2003.

State of the Climate in 2002, *Bull. Amer. Meteor. Soc.*, **84**, S1-S68.

Julia Noguez-Paegle, Carlos R. Mechoso, Rong Fu, E. Hugo Berbery, Winston, C. Chao, Tsing-Chang Chen, Kerry Cook, Alvaro F. Diaz, David Enfield, Rosana Ferreira, Alice M. Grimm, Vernon Kousky, Brant Liebmann, Jose Marengo, Kingtse Mo, J. David Neelin, Jan Paegle, Andrew W. Robertson, Anji Seth, Carolina S. Vera, Jiayu Zhou, 2002: Progress in Pan American CLIVAR Research: Understanding the South American Monsoon. *Meteorologica*, **1**, 3–32.

Seth, A., R.C. Bales and R.E. Dickinson, 1999: A framework for the study of seasonal snow hydrology and its interannual variability in the Alpine regions of the Southwest, *Journal of Geophysical Research*, **104**, 22117-22135.

Seth, A., and F. Giorgi, 1998: The effects of domain choice on summer precipitation simulation and sensitivity in a regional climate model, *Journal of Climate*, **11**, 2698-2712.

Seth, A., and F. Giorgi, 1996: A 3-dimensional model study of organized mesoscale circulations induced by vegetation. *Journal of Geophysical Research*, **101**, pp. 7371–7391.

Seth, A., F. Giorgi and R.E. Dickinson, 1994: Simulating fluxes from heterogeneous land surfaces: Explicit subgrid method employing the Biosphere–Atmosphere Transfer Scheme (BATS). *Journal of Geophysical Research*, **99**, pp. 18651–18667.

PROCEEDINGS,
TECHNICAL
REPORTS

Landman, W., A. Seth, and S. Camargo, 2002: The effect of regional climate model domain choice on the simulation of tropical cyclone-like vortices in the southwestern Indian Ocean, *IRI Technical Report*, No. 02-06, pp. 33.

Seth, A., M. Dille, J. G. Phillips, L. Goddard, C. Clark, C. Ropelewski, 2002: Preparing for El Niño: Advancing regional plans and interregional communication. *Workshop Proceedings*, April 29–May 2, Palisades, NY, pp. 72.

INVITED TALKS,
CONFERENCE
ABSTRACTS

Seth, A.: Implications of climate change for the Andean Highlands, *Environmental Engineering Seminar*, University of Connecticut, 27 April, Storrs, CT.

Seth, A., J. Thibeault, M. Garcia 2007: Climate variability and change in the Andean Highlands, *American Association of Geographers Annual Meeting*, 17–21 April, San Francisco, CA.

Seth, A., R. DeConto, D. Pollard, 2006: Adapting RegCM3 to the south polar region: Results from a 10-year nested simulation, *American Geophysical Union Fall Meeting*, 11–15 December, San Francisco, CA.

Seth, A., S. Rauscher, S. Camargo, J-H Qian, J. Pal, 2006: GCM and Reanalysis Driven Regional Model Climatologies for South America, *Third International Conference on Theory and Use of Regional Climate Models*, 29 May - 9 June, ICTP, Trieste, Italy, INVITED.

Seth, A., 2006: Climate in the Altiplano: Observed and simulated variability and trends, *Adapting to change in the Andean Highlands, SANREM CRSP*, 24-28 April, La Paz, Bolivia.

Seth, A., S. Rauscher, S. Camargo, J-H Qian, 2006: GCM and Reanalysis Driven Regional Model Climatologies for South America, *Eighth International Conference on Southern Hemisphere Meteorology and Oceanography*, 24-28 April, Foz do Iguaçu, Brazil.

Seth, A., 2006: A brief history of climate science in the 20th Century, *Program in Geosciences, University of Connecticut*, Storrs, CT, February.

Seth, A., S. Rauscher and B. Liebmann 2005: Evaluation of nested regional model ensemble climatology for South America: Annual cycle, interannual variability, and rainy season onset, *CLIVAR VAMOS MESA Science Working Group*, 7-11 March, Mexico City, INVITED.

- Rauscher, S., A. Seth and B. Liebmann 2004: Regional climate model simulated timing and character of seasonal rains in South America, *American Geophysical Union Fall Meeting*, 13-17 December, San Francisco.
- Seth, A., S. Rauscher, and S. Camargo 2004: Interannual variability of South American climate in a regional climate model and observations, *American Geophysical Union Fall Meeting*, 13-17 December, San Francisco.
- Seth, A., 2004: Seasonal extremes and subseasonal statistics for South America from a regional climate and observations, *GEWEX CEOP Inter Monsoon Study, Workshop on American Monsoons*, 16-18 September, Montevideo, Uruguay, INVITED.
- Seth, A., S. Rauscher, J.-H. Qian, and S. Camargo, 2004: Choosing a nested model domain for climatological integrations over South America, *2nd Workshop on the theory and use of regional climate models*, May 31-June 9, ICTP, Trieste, Italy, INVITED.
- Seth, A., 2004: Dynamical downscaling seasonal extremes and subseasonal statistics: some examples from South America, *Indian Institute of Science*, February 19, Bangalore.
- Seth, A., Analyzing warm season daily rainfall from a nested modeling system for South America, *Role of Indian Ocean in Climate Variability of India, INDOCLIM*, February 22-27, Indian Institute for Tropical Meteorology, Pune.
- Seth, A., M. Rojas and B. Liebmann, 2003: Analysis of daily rainfall and seasonal extremes from a nested modeling system for South America, *U.S. CLIVAR Pan American Workshop*, September 16-18, Boulder, CO.
- Seth, A. 2003: Analysis of daily rainfall from a nested modeling system for South America, *Workshop on the theory and use of regional climate models*, May 26-June 6, Trieste, INVITED.
- Seth, A. 2003: Simulating rainfall extremes in South America: sensitivity to remote and local forcing, *Workshop on the theory and use of regional climate models*, May 26-June 6, Trieste, INVITED.
- Seth, A. and M. Rojas, 2003: Warm season daily rainfall in South America using a nested modeling system, *Seventh International Conference on Southern Hemisphere Meteorology and Oceanography*, 24-28 March, Wellington, New Zealand.
- Seth, A. and B. Lyon, 2003: Impacts of El Niño 2002-2003: Southern Africa and South Asia, *Seventh International Conference on Southern Hemisphere Meteorology and Oceanography*, 24-28 March, Wellington, New Zealand.
- Seth, A., 2002: Climate Impacts Monitoring and Analysis for El Niño 2002-2003, *International Workshop on Regional Integrated Assessment of Climate Impacts*, September 16-20, 2002, Castelvecchio Pascoli, Italy.
- Phillips, J. G. and A. Seth, 2002: Characteristics that help households weather climate variability, now and in the future, *AGU Spring Meeting*, 28-31 May, Washington, D.C.
- Seth, A. and M. Rojas, 2002: Reanalyses and GCM driven nested model sensitivity studies for South America, *13th Symposium on Global Change and Climate Variations, American Meteorological Society Annual Meeting*, 12-17 January, Orlando, FL.
- Seth, A., 2001: Transferability of a regional climate model between the tropics and mid-latitudes, *American Geophysical Union Fall Meeting*, 10-15 December, San Francisco, CA, INVITED.
- Seth, A., 2001: Tropical/sub-tropical relationships in nested model simulations of the South American monsoon system, *Monsoon Systems Around the World, 8th Scientific Assembly of International Association of Meteorology and Atmospheric Sciences (IAMAS)*, 10-18 July, Innsbruck,

Austria.

- Seth, A., 2001: Influences of Amazon basin moisture on seasonal precipitation in a regional climate model study, *American Geophysical Union Spring Meeting*, 29 May - 2 June, Boston, MA.
- Seth, A. and M. Rojas-Corradi, 2000: A methodology for evaluating dynamical downscaling tools for seasonal prediction: A test case for tropical America, *25th Climate Diagnostics and Prediction Workshop*, 23-27 October, Palisades, New York.
- Rojas-Corradi, M. and A. Seth, 2000: A nested regional climate study over tropical America: sensitivity to boundary conditions, *25th Climate Diagnostics and Prediction Workshop*, 23-27 October, Palisades, New York.
- Seth, A., 2000: Dynamical downscaling of climate anomalies in tropical South America, *Sixth International Conference on Southern Hemisphere Meteorology*, Santiago, Chile, April.
- Seth, A., 1999: Regional climate simulations over tropical South America with the NCAR regional model, *Workshop on Regional Climate Prediction and Downscaling Techniques for South America*, Petropolis, Brasil, September.
- Seth, A., 1999: Regional climate model studies of warm season rainfall in tropical South America. *AMS Climate Variations Meeting*, Denver, September. Seth, A., 1999: Seasonal atmospheric moisture transports in the Amazon Basin. *IUGG*, Birmingham, UK, July.
- Seth, A., 1999: Applications of regional climate models, *International Research Institute for Climate Prediction, Columbia University*, New York, April.
- Seth, A., 1999: Simulating winter season hydrology in the western United States, *AMS Annual Meeting*, Dallas, January.
- Seth, A., 1998: Can a regional climate model be used to predict seasonal water resource anomalies in the Southwest? *Program in Atmospheric and Oceanic Sciences (PAOS)*, University of Colorado, November, INVITED.
- Seth, A. and L.O. Mearns, 1998: The Role of Numerical Climate Models in Assessments of Climate Variability and Environmental Change, *Eastern Midwest Climate Change Workshop*, Indianapolis, IN, June, INVITED.
- Seth, A., 1997: Capabilities of the NCAR Regional Climate Model (RegCM) for Seasonal Prediction Studies over North America, *Modeling Strategy for Regional Climate Prediction and Assessment: A PACS/GCIP workshop*, NOAA, Silver Spring, MD, October, INVITED.
- Seth, A., 1997: Remote Vs Local Control of Extreme Precipitation Events: A Regional Climate Model Study, *Atmospheric Sciences*, University of Arizona, Tucson, AZ, October.
- Seth, A., 1997: Simulation Vs Sensitivity in a Regional Climate Model, Center for Ocean-Land-Atmosphere Studies (COLA), Calverton, MD, September, INVITED.
- Seth, A., 1997: Sensitivity of a Regional Climate Model to Organized Mesoscale Circulations Induced by Vegetation, *AMS Annual Meeting*, Special symposium on boundary layer and turbulence, Long Beach, CA, INVITED.
- Seth, A. and F. Giorgi 1997: A Regional Climate Model Study of the Role of Soil Moisture in the Extreme Events of 1988 and 1993 in the Central United States, *AMS Annual Meeting*, 13th Conference on hydrology, Long Beach, CA.
- Seth, A., 1996: The Sensitivity of Summertime Precipitation to Choice of Domain in a Regional Climate Model, *NCAR Climate and Global Dynamics Division Seminar*, Boulder, CO.

Seth, A., 1994: Atmospheric Response to Heterogeneous Land Surface Thermal Forcing: Implications for Climate, *AGU Fall Meeting*, San Francisco, CA.

Seth, A., 1994: The Sensitivity of a 3-Dimensional Atmospheric Model to Land surface forcing, *Workshop on test and evaluation of the USGS 1-km AVHRR land cover characteristics data for the conterminous United States*, April 18-20, INVITED.

Seth, A. and F. Giorgi, 1992: An Explicit Treatment of Land Surface Heterogeneities Using a Vectorized Form of the Biosphere Atmosphere Transfer Scheme (VBATS), *AGU Fall Meeting*, San Francisco, CA.

SCIENTIFIC
OUTREACH

Seth, A., 2007: Are humans responsible for global warming? *Climate Change Teach-In*, E. O. Smith High School, 25 April, Mansfield, CT, INVITED.

Seth, A., 2007: Global Warming Panel Discussion moderated by US Congressman John B. Larson, *World Affairs Council*, Mark Twain House, 10 April, Hartford, CT, INVITED.

Seth, A., 2006: Climate: How did we get here? Where on Earth are we going? , *Global Issues Conference: Climate Change*, Manchester Community College, October, Manchester, CT, INVITED.

Seth, A., 2006: Red Sky at Morning, by James Gustave Speth, Book Discussion, *West Hartford Public Library*, April, West Hartford, CT.

Seth, A., 2003: CLIVAR and GECAFS, *GLobal Environmental Change and Food Systems (GECAFS) Proposal Planning Workshop*, 24-26 February, St. James, Barbados, INVITED.

Seth, A., 2003: The climate factor in evolving regional impacts, *Meeting of the IRI Board of Overseers*, January 22-23, 2003, Palisades, New York.

Seth, A., 2002: Regional Climate Modeling Research and Applications at the IRI, *Southern Africa Regional Atmospheric Modeling Workshop*, November 25-29, 2002, University of Pretoria, South Africa, INVITED.

Seth, A., 2002: Climate information for applications, *Human Dimensions of Global Change Research, Principal Investigators Meeting*, 23-25 October, Seabrook Island, South Carolina.

Seth, A., 2001: Climate forecasts and uncertainty, *Workshop on Media and Climate Information*, 24-25 August, Jinja, Uganda.

Seth, A., 2001: Climate and the Role of Oceans, *Workshop on Media and Climate Information*, 24-25 August, Jinja, Uganda.

Regional Climate Research: Needs and Opportunities Workshop, 2-4 April 2001, Boulder, CO.

IRI/WMO/IDB Mission to Review Existing Infrastructure and Capabilities for an ENSO Early Warning System, 10-14 October 2000, Kingston, Jamaica.

Seth, A., 1999: Climate model predictions for the February-May 2000 rainy season in Northeast Brazil. FUNCEME, Fortaleza, Brazil, December.

Seth, A., C.F. Ropelewski, and M.B. Blumenthal, 1999: The IRI Climate Information System for Water Resources. *AWRA Annual Meeting*, Seattle, December.

INSTITUTIONAL
ACTIVITIES

- *International workshop on preparing for El Niño: Advancing regional plans and interregional communication*, IRI, 29 April – 2 May 2002, Palisades, New York, *Chair* and principal organizer, with M. Dilley, J. Phillips, L. Goddard, C. Clark, and C. Ropelewski.

- *Early career investigators workshop on multidisciplinary research*, Earth Institute, Columbia University, 27 February 2002, New York, New York, *Co-Chair*, with J. Phillips (Chair) and K. Mastriani.
- *Workshop on media and climate information*, 24–25 August 2001, Jinja, Uganda, *Co-Organizer*, with J. Phillips (principal organizer), T. Kestin, and G. Marcus.