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EDUCATION:

Ph.D., Rutgers University, Environmental Sciences, 1998.

Dissertation: "Tropical Temperatures at the Last Glacial Maximum: An Atmosphere-Mixed Layer Model Simulation and Comparison with Paleotemperature Reconstructions"

M.S., Rutgers University, Meteorology, 1979.

Thesis: "Predictability of monthly North Pacific sea level pressure from monthly sea surface temperature for the period 1933-1976"

B.S., Rutgers University, Meteorology, 1977.

POSITIONS HELD:

Co-Director Climate and Environmental Change Initiative Rutgers University New Brunswick, New Jersey	2006-present
Director Center for Environmental Prediction Rutgers University New Brunswick, New Jersey	2005-present
Associate Professor Department of Environmental Sciences Rutgers University New Brunswick, New Jersey	2003-present
Director Graduate Program in Atmospheric Science Rutgers University New Brunswick, New Jersey	2005-2008
Acting Director Center for Environmental Prediction Rutgers University New Brunswick, New Jersey	2004-2005

Research Meteorologist (GS-14) Geophysical Fluid Dynamics Laboratory National Oceanic and Atmospheric Administration Princeton, New Jersey	1995-2003
Senior Research Associate (GS-13) Geophysical Fluid Dynamics Laboratory National Oceanic and Atmospheric Administration Princeton, New Jersey	1988-1995
Research Associate (GS-9,11,12) Geophysical Fluid Dynamics Laboratory National Oceanic and Atmospheric Administration Princeton, New Jersey	1982-1988
Part-Time Lecturer Department of Meteorology and Physical Oceanography Rutgers University New Brunswick, New Jersey	1982-1988
Instructor (non-tenure track) Department of Meteorology and Physical Oceanography Rutgers University New Brunswick, New Jersey	1979-1982

MEMBERSHIPS IN PROFESSIONAL AND LEARNED SOCIETIES:

American Meteorological Society

American Geophysical Union

American Association for the Advancement of Science

Sigma Xi

HONORS AND AWARDS:

Research Excellence Award, Cook College, Rutgers University, 2006.

Special Award, American Meteorological Society, 2002. (Award given to members of the Editorial Board, *Glossary of Meteorology*, 2nd Edition, "for marshaling the energies and talents of hundreds of contributors to produce a reference work of immeasurable benefit to the community.")

Distinguished Authorship Award, NOAA Environmental Research Laboratories, 1987. Title of Paper: The Influence of Continental Ice Sheets on the Climate of an Ice Age (with S. Manabe)

Graduated with Highest Honors, Cook College, Rutgers University, 1977.

George H. Cook Scholar, Cook College, Rutgers University, 1977.

PROFESSIONAL ACTIVITIES:

Member, Scientific Review Group, United Kingdom Meteorological Office Hadley Centre, 2007-present.

Member, International Commission on Climate, 2002-present.

Fellow, Cooperative Institute for Climate and Ocean Research, 1999-present.

Contributor and Reviewer, Fourth Assessment, Intergovernmental Panel on Climate Change, 2007.

Proposal Review Panel, Climate Change Data and Detection Program, National Oceanic and Atmospheric Administration, 2007.

Proposal Review Panel, Climate Change Data and Detection Program, National Oceanic and Atmospheric Administration, 2006.

Participant, Science Communications and the Media Workshop, July 2006.

Participant, Science Communications and the Media Workshop, June 2005.

Proposal Review Panel, Climate Change Data and Detection Program, National Oceanic and Atmospheric Administration, 2004.

Proposal Review Panel, CLIVAR Program, National Oceanic and Atmospheric Administration, 2003.

Proposal Review Panel, Climate Change Data and Detection Program, National Oceanic and Atmospheric Administration, 2003.

Proposal Review Panel, Climate Change Data and Detection Program, National Oceanic and Atmospheric Administration, 2002.

Proposal Review Panel, Earth System History Program, National Science Foundation, 2000-2001.

Contributor and Reviewer, Third Assessment, Intergovernmental Panel on Climate Change, 2001.

Site Visit Committee, Natural Sciences and Engineering Research Council of Canada Collaborative Special Project, "Climate System History and Dynamics 2," 1998

Outstanding Paper Evaluation Committee, Environmental Research Laboratories, National Oceanic and Atmospheric Administration, 1997.

International Advisory Board, Natural Sciences and Engineering Research Council of Canada Collaborative Special Project, "Climate System History and Dynamics," 1996-1997.

Committee on Paleooceanography and Paleoclimatology, American Geophysical Union, 1994-2000.

Technical Advisory Committee, Environmental Health Center Reporter's Guide to Climate and Global Change, 1992-1994.

Committee on Mountain Meteorology, American Meteorological Society, 1993-1996.

Advisory Panel, NOAA Paleoclimatology Program, 1994-1995.

ARTICLES IN REFEREED JOURNALS:

- Yoshimori, M., and A. J. Broccoli, 2008: Equilibrium response of an atmosphere-mixed layer ocean model to different radiative forcing agents: Global and zonal mean response. *J. Climate*, in press.
- Came, R. E., W. B. Curry, D. W. Oppo, A. J. Broccoli, R. J. Stouffer, and J. Lynch-Stieglitz, 2007: North Atlantic intermediate depth variability during the Younger Dryas: Evidence from benthic foraminiferal Mg/Ca and the GFDL R30 coupled climate model. In *Ocean Circulation: Mechanisms and Impacts*, Monograph Series Volume 173, Washington, American Geophysical Union, 247-263.
- Taylor, K.E., M. Crucifix, P. Braconnot, C.D. Hewitt, C. Doutriaux, A.J. Broccoli, J.F.B. Mitchell, and M.J. Webb, 2007: Estimating shortwave radiative forcing and response in climate models. *J. Climate*, **20**, 2530-2543.
- Hewitt, C. D., A. J. Broccoli, M. Crucifix, J. M. Gregory, J. F. B. Mitchell, R. J. Stouffer, 2006: The effect of a large freshwater perturbation on the glacial North Atlantic Ocean using a coupled general circulation model. *J. Climate*, **19**, 4436-4447.
- Stouffer, R. J., A. J. Broccoli, T. L. Delworth, K. W. Dixon, R. Gudgel, I. Held, R. Hemler, T. R. Knutson, H.-C. Lee, M. D. Schwarzkopf, B. Soden, M. J. Spelman, M. Winton, and F. Zeng, 2006: GFDL's CM2 global coupled climate models. Part IV: Idealized climate response. *J. Climate*, **19**, 723-740.
- Delworth, T. L., A. J. Broccoli, A. Rosati, R. J. Stouffer, V. Balaji, J. T. Beesley, W. F. Cooke, K. W. Dixon, J. Dunne, K. A. Dunne, J. W. Durachta, K. L. Findell, P. Ginoux, A. Gnanadesikan, C. T. Gordon, S. M. Griffies, R. Gudgel, M. J. Harrison, I. M. Held, R. S. Hemler, L. W. Horowitz, S. A. Klein, T. R. Knutson, P. J. Kushner, A. L. Langenhorst, H.-C. Lee, S. J. Lin, J. Lu, S. L. Malyshev, P.C. Milly, V. Ramaswamy, J. Russell, M. D. Schwarzkopf, E. Shevliakova, J. Sirutis, M. Spelman, W. F. Stern, M. Winton, A. T. Wittenberg, B. Wyman, F. Zeng, and R. Zhang, 2005: GFDL's CM2 global coupled climate models – Part 1: Formulation and simulation characteristics. *J. Climate*, **19**, 643-674.
- Broccoli, A. J., K. A. Dahl, and R. J. Stouffer, 2006: The Response of the ITCZ to Northern Hemisphere cooling. *Geophys. Res. Lett.*, **33**, L01702, doi:10.1029/2005GL024546.
- Hall A., A. C. Clement, A. J. Broccoli, C. S. Jackson, 2005: The importance of atmospheric dynamics in the northern hemisphere wintertime climate response to changes in earth's orbit. *J. Climate*, **18**, 1315-1325, DOI 10.1175/JCLI3327.1.
- Dahl, K. A., A. J. Broccoli, and R. J. Stouffer, 2005: Assessing the role of North Atlantic freshwater forcing in millennial scale climate variability: A tropical Atlantic perspective. *Climate Dynamics*, **24**, 325-346.
- The GFDL Global Atmospheric Model Development Team, 2004: The new GFDL global atmosphere and land model AM2/LM2: Evaluation with prescribed SST simulations. *J. Climate*, **17**, 4641-4673.
- Soden, B. J., A. J. Broccoli, and R. S. Hemler, 2004: On the use of cloud forcing to estimate cloud feedback. *J. Climate*, **17**, 3661-3665.

- Rosenthal, Y., and A. J. Broccoli, 2004: In search of paleo-ENSO. *Science*, **304**, 219-221.
- Clement, A. C., A. Hall, and A. J. Broccoli, 2004: The importance of precessional signals in the tropical climate. *Climate Dynamics*, **22**, 327-341, DOI: 10.1007/s00382-003-0375-8.
- Broccoli, A. J., K. W. Dixon, T. L. Delworth, T. R. Knutson and R. J. Stouffer, 2003: Twentieth-century temperature and precipitation trends in ensemble climate simulations including natural and anthropogenic forcing. *J. Geophys. Res.*, **108**, 4798, doi: 10.1029/2003JD003812.
- Jackson, C. S., and A. J. Broccoli, 2003: Orbital forcing of Arctic climate: Mechanisms of climate response and implications for continental glaciation. *Climate Dynamics*, **21**, 539-557, DOI 10.1007/s00382-003-0351-3.
- Karoly, D. J., K. Braganza, P. A. Stott, J. M. Arblaster, G. A. Meehl, A. J. Broccoli, and K. W. Dixon, 2003: Detection of a human influence on North American climate. *Science*, **302**, 1200-1203.
- Hewitt, C. D., R. J. Stouffer, A. J. Broccoli, J. F. B. Mitchell, and P. J. Valdes, 2003: The effect of ocean dynamics in a coupled GCM simulation of the last glacial maximum. *Climate Dynamics*, **20**, 203-218.
- Delworth, T. L., R. J. Stouffer, K. W. Dixon, M. J. Spelman, T. R. Knutson, A. J. Broccoli, P. J. Kushner, and R. T. Wetherald, 2002: Review of simulations of climate variability and change with the GFDL R30 coupled climate model. *Climate Dynamics*, **19**, 555-574.
- Andreasen, D. H., A. C. Ravelo, and A. J. Broccoli, 2001: Remote forcing at the Last Glacial Maximum in the tropical Pacific Ocean. *J. Geophys. Res.*, **106**, 879-897.
- Broccoli, A. J., T. L. Delworth, and N.-C. Lau, 2001: The effect of changes in observational coverage on the association between surface temperature and the Arctic oscillation. *J. Climate*, **14**, 2481-2485.
- Hewitt, C. D., A. J. Broccoli, J. F. B. Mitchell, and R. J. Stouffer, 2001: A coupled model study of the last glacial maximum: Was part of the North Atlantic relatively warm? *Geophys. Res. Lett.*, **28**, 1571-1574.
- Levitus, S., J. I. Antonov, J. Wang, T. L. Delworth, K. W. Dixon, and A. J. Broccoli, 2001: Anthropogenic warming of Earth's climate system. *Science*, **292**, 267-270.
- Broccoli, A. J., 2000: Tropical cooling at the Last Glacial Maximum: An atmosphere-mixed layer ocean model simulation. *J. Climate*, **13**, 951-976.
- Joussaume, S., K. E. Taylor, P. Braconnot, J. F. B. Mitchell, J. E. Kutzbach, S. P. Harrison, I. C. Prentice, A. J. Broccoli, A. Abe-Ouchi, P. J. Bartlein, C. Bonfils, B. Dong, J. Guiot, K. Herterich, C. D. Hewitt, D. Jolly, J. W. Kim, A. Kislov, A. Kitoh, M. F. Loutre, V. Masson, B. McAvaney, N. McFarlane, N. de Noblet, W. R. Peltier, J. Y. Peterschmitt, D. Pollard, D. Rind, J. F. Royer, M. E. Schlesinger, J. Syktus, S. Thompson, P. Valdes, G. Vettoretti, R. S. Webb, U. Wypytta, 1999: Monsoon changes for 6000 years ago: Results of 18 simulations from the Paleoclimate Modeling Intercomparison Project (PMIP). *Geophys. Res. Lett.*, **26**, 859-862.
- Broccoli, A. J., N-C. Lau, and M. J. Nath, 1998: The cold ocean-warm land pattern: Model simulation and relevance to climate change detection. *J. Climate*, **11**, 2743-2763.

- Broccoli, A. J., and E. P. Marciniak. 1996: Comparing simulated glacial climate and paleodata: A reexamination. *Paleoceanography*, **11**, 3-14.
- Lindberg, C., and A. J. Broccoli, 1996: Representation of topography in spectral climate models and its effect on simulated precipitation. *J. Climate*, **9**, 2641-2659.
- Broccoli, A. J., S. Manabe, J. F. B. Mitchell, and L. Bengtsson, 1995: Comments on "Global climate change and tropical cyclones": Part II. *Bull. Amer. Meteor. Soc.*, **76**, 2243-2245.
- Broccoli, A. J., 1994: News and Views: Learning from past climates. *Nature*, **371**, 282.
- Broccoli, A. J., and S. Manabe, 1992: The effects of orography on midlatitude Northern Hemisphere dry climates. *J. Climate*, **5**, 1181-1201.
- Broccoli, A. J., and S. Manabe, 1992: Reply to Evans. *Geophys. Res. Lett.*, **19**, 1525-1526.
- Broccoli, A. J., and S. Manabe, 1990: Can existing climate models be used to study anthropogenic changes in tropical cyclone climate? *Geophys. Res. Lett.*, **17**, 1917-1920.
- Manabe, S., and A. J. Broccoli, 1990: Mountains and arid climates of middle latitudes. *Science*, **247**, 192-195.
- Broccoli, A. J., and S. Manabe, 1987. The effects of the Laurentide ice sheet on North American climate during the last glacial maximum. *Géographie Physique et Quaternaire*, **41**, 291- 299.
- Broccoli, A. J., and S. Manabe, 1987: The influence of continental ice, atmospheric CO₂, and land albedo on the climate of the last glacial maximum. *Climate Dynamics*, **1**, 87-99.
- Manabe, S., and A. J. Broccoli, 1985: The influence of continental ice sheets on the climate of an ice age. *J. Geophys. Res.*, **90**, 2167-2190.
- Manabe, S., and A. J. Broccoli, 1985: A comparison of climate model sensitivity with data from the last glacial maximum. *J. Atmos. Sci.*, **42**, 2643-2651.
- Manabe, S., and A. J. Broccoli, 1984: Ice-age climate and continental ice sheets: some experiments with a general circulation model. *Ann. Glaciology*, **5**, 100-105.
- Broccoli, A. J., and R. P. Harnack, 1981: Predictability of monthly North Pacific sea level pressure from monthly sea surface temperature for the period 1933-1976. *Mon. Weather Rev.*, **109**, 2107-2117.
- Cardone, V. J., A. J. Broccoli, C. V. Greenwood, and J. A. Greenwood, 1980: Error characteristics of extratropical-storm wind fields specified from historical data. *J. Petroleum Tech.*, 872-880.
- Harnack, R. P., and A. J. Broccoli, 1979: Associations between sea surface temperature gradient and overlying mid-troposphere circulation in the North Pacific region. *J. Phys. Oceanog.*, **9**, 1232-1242.

BOOK CHAPTERS:

- Broccoli, A. J., 2007: Last glacial maximum GCMs. In *Encyclopedia of Quaternary Science*, S. A. Elias, Ed., Elsevier, 1927-1934.
- Broccoli, A. J., and S. Manabe, 1997: Mountains and midlatitude aridity. In *Tectonic Uplift and Climate Change*, New York: Plenum Press, 89-121.
- Broccoli, A. J., 1994: Climate model sensitivity, paleoclimate and future climate change. In *Long-Term Climatic Variations*. NATO ASI Series I, Vol. 22, Berlin; Heidelberg: Springer-Verlag, 551-567.
- Broccoli, A. J., and S. Manabe, 1993: Climate model studies of interactions between ice sheets and the atmosphere-ocean system. In *Ice in the Climate System*, NATO ASI Series I, Vol. 12, Berlin; Heidelberg: Springer-Verlag, 271-290.
- Manabe, S., and A. J. Broccoli, 1984: Influence of the CLIMAP ice sheet on the climate of a general circulation model: implications for the Milankovitch theory. In *Milankovitch and Climate*, Part 2, Reidel Publishing Co., 789-799.

OTHER PUBLICATIONS:

- Delworth, T. L., A. J. Broccoli, K. Dixon, I. Held, T. R. Knutson, P. J. Kushner, M. J. Spelman, R. J. Stouffer, K. Y. Vinnikov, and R. E. Wetherald, 1999: Coupled climate modelling at GFDL: Recent accomplishments and future plans. *CLIVAR Exchanges*, **4**, 15-20.
- Broccoli, A. J., 1986: Characteristics of seasonal snow cover as simulated by GFDL climate models. In *SNOW WATCH '85*, Boulder, CO: World Data Center A for Glaciology (Snow and Ice), 241-248.
- Reiss, N. M., and A. J. Broccoli, 1981: A microcomputer-based teletype control system. *Natl. Wea. Digest*, **6**, 58-62.

PAPERS IN PREPARATION OR SUBMITTED FOR PUBLICATION:

- Yoshimori, M., and A. J. Broccoli, 2008: On the link between Hadley circulation changes and radiative feedback processes. *Geophys. Res. Lett.*, in preparation.
- Krasting, J. A. J. Broccoli, K. W. Dixon, and J. R. Lanzante, 2008: Snowfall trends in eastern North America in projections of future climate. *J. Climate*, in preparation.
- Manabe, S., and A. J. Broccoli, 2008: Radiative feedbacks and climate sensitivity. *Rev. Geophys.*, in preparation.

REVIEWS:

- Broccoli, A. J., 2006: Review of *Climate Change: A Natural Hazard*. In *Bull. Amer. Meteor. Soc.*, **87**, 95-97.

SCIENTIFIC PRESENTATIONS:

"Response of Climate to Glacial Forcing in the GFDL CM2.1 Coupled Atmosphere-Ocean Model" (poster), American Quaternary Association, 2008 Biennial Meeting, State College, PA, June 2008, with A. Wittenberg and M. Erb.

"Effects of Global Warming on Hydrologic Extremes," Department of Geography, University of Delaware, Newark, DE, May 2008, with A. DeAngelis.

"The Co-Evolution of Energy and Climate," Rutgers Energy Institute 3rd Annual Symposium, Piscataway, NJ, April 2008.

"Patterns of Response to Anthropogenic and Natural Forcing," Department of Meteorology, The Pennsylvania State University, State College, PA, November 2007, with M. Yoshimori.

"Effects of Global Warming on Hydrologic Extremes," Earth System Science Center, The Pennsylvania State University, State College, PA, October 2007, with A. DeAngelis.

"Understanding Climate Feedbacks" Department of Earth And Planetary Sciences, Rutgers University, New Brunswick, NJ, September 2007.

"Influence of Temperature and Precipitation Changes on Model-Simulated Monthly Snowfall Trends," AGU Fall Meeting, San Francisco, CA, December 2006, with J. Krasting.

"Some Aspects of Climate Model Response to Black Carbon in Quasi-Equilibrium Experiments with the GFDL GCM," AGU Fall Meeting, San Francisco, CA, December 2006, with M. Yoshimori.

"Mechanisms of Tropical Response to Idealized Extratropical Cooling Simulated with the GFDL Model," AGU Fall Meeting, San Francisco, CA, December 2006, with M. Yoshimori.

"On the Control of Zonal-Mean Position of the ITCZ in Quasi-Equilibrium GCM Experiments," AGU 2006 Joint Assembly, Baltimore, MD, May 2006, with M. Yoshimori.

"Some Perspectives on the Reconstruction of Past ITCZ Variations from Paleoclimate Data," AGU 2006 Joint Assembly, Baltimore, MD, May 2006, with M. Yoshimori.

"Understanding Climate Change," New Jersey Sustainable State Institute Energy Sustainability Project kickoff conference "Envisioning New Jersey's Energy Future," Bloustein School of Public Policy, New Brunswick, NJ, May 2006.

"The Response of the Intertropical Convergence Zone to Northern Hemisphere Cooling" at the Institute for Marine and Coastal Sciences, Rutgers University, New Brunswick, NJ, February 2006.

"Climate Change and Extreme Weather: Is There a Connection?" Department of Geology and Meteorology, Kean University, Union, NJ, November 2005

"Extreme Responses in Global Warming Simulations," Workshop on North American Climate Extremes, Aspen Global Change Institute, Aspen, CO, July 2005

"The Response of the ITCZ to Northern Hemisphere Cooling" Geology and Geophysics Department Seminar, Woods Hole Oceanographic Institution, Woods Hole, MA, April 2005.

"Global Warming and Climate Feedbacks," Department of Physics and Astronomy Colloquium, Rutgers University, New Brunswick, NJ, March, 2005.

"Paleoclimate Modeling and Climate Sensitivity," The Suki Manabe Symposium at the 2005 Annual Meeting of the American Meteorological Society, San Diego, CA, January 2005.

"Global Warming and Simulated Snowfall Trends in Eastern North America" (poster), The Suki Manabe Symposium, American Meteorological Society 2005 Annual Meeting, San Diego, CA, January 2005, with John P. Krasting.

"Diagnosis of Radiative Feedbacks in the Latest Version of the GFDL AM2 Climate Model" (poster), The Suki Manabe Symposium, American Meteorological Society 2005 Annual Meeting, San Diego, CA, January 2005, with Stephanie A. Weber.

"Simulating the Response of Climate to Orbital Forcing," The Pliocene Paradox, Princeton University, Princeton, NJ, October 2004.

"Simulation and Detection of Climate Change on Global, Continental and Regional Scales," Institute for Terrestrial and Planetary Atmospheres, Stony Brook University, Stony Brook, NY, September 2004.

"Feedbacks and Sensitivity in GFDL's AM2 Model," Intergovernmental Panel on Climate Change Workshop on Climate Sensitivity, Paris, France, July 2004.

"Climate Feedbacks in the GFDL AM2 Model," 15th Symposium on Global Change and Climate Variations at the 2004 Annual Meeting of the American Meteorological Society, Seattle WA, January 2004.

"Evaluating Climate Models Using Records of Past Climates" Department of Geological Sciences, Rutgers University, New Brunswick, NJ, October 2003.

"Evaluating Climate Models Using Records of Past Climates" NOAA Ad Hoc Paleoclimatology Group Meeting, Amherst, MA, October 2003.

"Sensitivity and Feedbacks in Cess and Mixed Layer Runs" NCAR/GFDL Collaboration Meeting, Princeton, NJ, September 2003.

"Contributions of High-Latitude Feedbacks to Climate Sensitivity" 7th Conference on Polar Meteorology and Oceanography, Hyannis, MA, May 2003.

"What Every Broadcast Meteorologist Should Know About Global Warming" 31st Conference on Broadcast Meteorology, American Meteorological Society, Williamsburg, VA, June 2002.

"Twentieth Century Trends in Ensemble Climate Simulations with Anthropogenic and Natural Forcings" 2002 Spring Meeting, American Geophysical Union, Washington, DC, May 2002.

"Twentieth Century Trends in Ensemble Climate Simulations with Anthropogenic and Natural Forcings" Department of Environmental Sciences, Rutgers University, New Brunswick, NJ, April 2002.

"Ensemble Climate Simulations Including Natural and Anthropogenic Forcing" Thirteenth Symposium on Global Change Studies, American Meteorological Society, Orlando, FL,

January 2002.

"Testing Climate Prediction Models" U.S. CLIVAR Scientific Steering Committee Meeting, Princeton, NJ, December 2001.

"Simulating the Response of Climate to Orbital Forcing" Department of Environmental Sciences, Rutgers University, New Brunswick, NJ, November 2001.

"Twentieth Century Surface Temperature Trends in Ensemble Climate Simulations Using Natural and Anthropogenic Forcing" First International Conference on Global Warming and the Next Ice Age, Halifax, NS, Canada, August 2001.

"Ensemble Climate Simulations Using Natural and Anthropogenic Forcing: 1865-1998" IAMAS 2001 General Assembly, Innsbruck, Austria, July 2001.

"Our Changing Climate: Something Old, Something New, What Will Happen? and What To Do?" Delaware Valley Chapter, Air and Waste Management Association, Fort Washington, PA, January 2001.

"Ice Age Climate Sensitivity: The Relative Importance of Atmospheric and Oceanic Processes" Lamont-Doherty Earth Observatory, Palisades, NY, December 2000.

"Simulation of the Climatic Effects of Ice Sheet Elevation" EPILOG (Environmental Processes of the Ice Ages: Land, Ocean and Glaciers) Workshop, Mt. Hood, Oregon, October 2000.

"Future Climate Projections: What Will the 21st Century Bring?" NASA/USRA Public Lecture Series, Greenbelt, MD, June 2000.

"Response of Arctic Climate to Changes in Earth's Orbit" Sea Ice in the Climate System: The Record of the North Atlantic Arctic, Kirkjubaejarklaustur, Iceland, June 2000.

"Response of Arctic Climate to Changes in Earth's Orbit" Hadley Centre for Climate Prediction and Research, Bracknell, United Kingdom, May 2000.

"Tropical Temperatures at the Last Glacial Maximum: Results from Climate Simulations" Woods Hole Oceanographic Institution Seminar Series, Woods Hole, MA, April 2000.

"Tropical Climate Anomalies Forced From the Extratropics" Woods Hole Oceanographic Institution Seminar Series, Woods Hole, MA, April 2000.

"Simulating the Response of the Holocene Climate to Orbital Forcing" 35th Annual Meeting of the Northeastern Section of the Geological Society of America, New Brunswick, NJ, March 2000.

"An Assessment of the Association Between the Arctic Oscillation and Northern Hemisphere Temperature" Eleventh Symposium on Global Change Studies, American Meteorological Society, Long Beach, CA, January 2000.

"An Assessment of the Association Between the Arctic Oscillation and Northern Hemisphere Temperature" 1999 Fall Meeting, American Geophysical Union, San Francisco, CA, December 1999.

"Extratropical Influences on Interhemispheric Asymmetry of LGM Tropical Climate" Third

Workshop of the Paleoclimate Modelling Intercomparison Project, Saint-Michel-Des-Saints, QB, Canada, October 1999.

"An Assessment of the Relationship Between the Arctic Oscillation and Northern Hemisphere Extratropical Mean Temperature" Workshop on Extratropical SST Anomalies, Boulder, CO, June 1999.

"Recent Climate Trends: The COWL Pattern and the Arctic Oscillation" Physical Oceanography Seminar Series, Woods Hole Oceanographic Institution, Woods Hole, MA, April 1999.

"Recent Climate Trends: The COWL Pattern and the Arctic Oscillation" Centre for Climate and Global Change Research, McGill University, Montreal, QB, Canada, October 1998.

"Extratropical Influences on Tropical Paleoclimates" American Geophysical Union Chapman Conference: Mechanisms of Millennial-Scale Global Climate Change, Snowbird, UT, June 1998.

"Extratropical Influences on Tropical Paleoclimates" 1998 Spring Meeting, American Geophysical Union, Boston, MA, May 1998.

"The Cold Ocean-Warm Land Pattern: Model Simulation and Relevance to Climate Change Detection" Ninth Conference on Global Change Studies, American Meteorological Society, Phoenix, AZ, January 1998.

"Simulated Spatial Variability of Glacial Cooling: Implications for the Reconstruction of Past Climates" 1997 Fall Meeting, American Geophysical Union, San Francisco, CA, December 1997.

"Spatial Variations in Low-Latitude Glacial Cooling Simulated by an Atmosphere-Mixed Layer Ocean Model" 1997 Spring Meeting, American Geophysical Union, Baltimore, MD, May 1997.

"Spatial Patterns in Low-Latitude Temperature Change During the Last Glacial" European Science Foundation Research Conference on Paleoclimate Modeling and Analysis, Tuscany, Italy, May 1997.

"The Cold Ocean-Warm Land Pattern in Long Integrations of a Coupled Ocean-Atmosphere Model" Columbia University Graduate Seminar Series, NASA/Goddard Institute for Space Studies, New York, NY, April 1997.

"The Cold Ocean-Warm Land Pattern in Long Integrations of a Coupled Ocean-Atmosphere Model" CLIVAR Workshop on Atmosphere-Ocean Interactions and Their Influence on Decadal-Scale Climate Variability, Vancouver, BC, Canada, September 1996.

"Simulation of Tropical Temperatures at the Last Glacial Maximum" 1995 Fall Meeting, American Geophysical Union, San Francisco, CA, December 1995.

"Simulation of Tropical Temperatures at the Last Glacial Maximum" First Workshop of the Paleoclimate Modelling Intercomparison Project, Colognes La Rouge, France, October 1995.

"Climate Model Simulation of Atmospheric Forcing Over the Glacial North Atlantic" XIV International Congress of the International Union for Quaternary Research, Berlin, Germany, August 1995.

"Representation of Topography in Spectral Climate Models and Its Effect on Simulated Precipitation" Conference on Mountain Meteorology, American Meteorological Society, Breckenridge, CO, July 1995.

"Greenhouse Warming" 1995 NOAA Colloquium on Operational Environmental Prediction, Camp Springs, MD, June 1995.

"Climate Model Simulation of Tropical Temperatures at the Last Glacial Maximum" 1995 Spring Meeting, American Geophysical Union, Baltimore, MD, May 1995.

"A Re-examination of Glacial Climate in the Tropics as Simulated by an Atmosphere-Mixed Layer Ocean Climate Model" Symposium on the Role of Tropical Sea Surface Temperature Variations in Past Global Climate Change, Lamont-Doherty Earth Observatory, Palisades, NY, March 1995.

"Comparing Simulated Glacial Climate and Paleodata: A Re-examination" 1994 Fall Meeting, American Geophysical Union, San Francisco, CA, December 1994.

"The Greenhouse Effect: The Science Base" Metropolitan New York in the Greenhouse: Infrastructure Planning for an Uncertain Future, New York, NY, November 1994.

"Comparing Simulated Glacial Climate and Paleodata: A Re-examination" United States-Russia Workshop on Paleocalibration of Climate Sensitivity, Silver Spring, MD, August 1994.

"Climate Models and Outlook for Future Climates" Forum on Human-Induced Climate Change, Annual Meeting of the American Association of Petroleum Geology, Denver, CO, June 1994.

"Greenhouse Warming" 1994 NOAA Colloquium on Operational Environmental Prediction, Camp Springs, MD, June 1994.

"Greenhouse Warming" 1993 NOAA Colloquium on Operational Environmental Prediction, Camp Springs, MD, June 1993.

"Precipitation Simulation in GFDL Climate Models" GEWEX/WGNE Workshop on Global Observations, Analyses and Simulations of Precipitation, Camp Springs, MD, October 1992.

"Climate Sensitivity to CO₂ and Ice Sheet Forcings" NATO Advanced Study Institute on Long-Term Climatic Variations: Data and Modeling, Siena, Italy, October 1992.

"Climate Model Studies of Interactions Between Ice Sheets and the Atmosphere-Ocean System" NATO Advanced Research Workshop on Ice in the Climate System, Aussois, France, September 1992.

"The Use of Climate Models in Forecasting Future Climate Change" Global Climate Change Symposium sponsored by American Chemical Society, Washington, DC, August 1992.

"Forecasting Possible Climate Change" 1992 NOAA Colloquium on Operational Environmental Prediction, Camp Springs, MD, June 1992.

"Simulation of Midlatitude Arid Climates: The Effect of Mountains and the Role of Land Surface Interaction" 1992 Spring Meeting, American Geophysical Union, Montreal, QB,

Canada, May 1992.

"Effects of Topography on Northern Hemisphere Midlatitude Dry Climates" Department of Soil, Crop and Atmospheric Sciences, Cornell University, Ithaca, NY, February 1992.

"Mountains and Midlatitude Arid Climates" National Center for Atmospheric Research, Boulder, CO, July 1991.

"Sensitivity Experiments at the Last Glacial Maximum" NATO Advanced Research Workshop on Paleoclimate Modeling, Saclay, France, May 1991.

"Simulation of Midlatitude Arid Climates: The Effect of Mountains and the Role of Land Surface Interaction" Eighth Conference on Hydrometeorology of the American Meteorological Society, Kananaskis, AB, Canada, October 1990.

"Global Climate Change Prediction" 83rd Annual Meeting of the Air and Waste Management Association, Pittsburgh, PA, June 1990.

"Mid-Continental Dryness Due to Increasing Greenhouse Gases: How Does It Compare to the 1988 Drought?" American Association for the Advancement of Science 1990 Annual Meeting, New Orleans, LA, February 1990.

"Simulation of Cyclonic Tropical Disturbances in Climate Models" 1989 Spring Meeting, American Geophysical Union, Baltimore, MD, May 1989.

"The Effects of the Laurentide Ice Sheet on North American Climate During the Last Glacial Maximum" XII International Congress of the International Union for Quaternary Research, Ottawa, ON, Canada, July 1987.

"Effect of Increasing Greenhouse Gases on Hydrology" AAAS Workshop on Climatic Variability, Climatic Change and Water Resource Planning, NASA/Goddard Institute for Space Studies, New York, NY, January 1987.

"Climate Model Sensitivity to Ice Age Boundary Conditions" Department of Meteorology and Physical Oceanography, Rutgers University, New Brunswick, NJ, February 1986.

"Characteristics of Seasonal Snow Cover as Simulated by GFDL Climate Models" SNOWWATCH 1985: Workshop on CO₂/Snow Interaction, College Park, MD, October 1985.

OTHER PRESENTATIONS, MEDIA INTERVIEWS:

"Climate Change: What We Know and Don't Know," Fourth National Integrity in Science Conference, Center for Science in the Public Interest, Washington, DC, July 2008.

"Energy Use and the Challenge of Global Climate Change," M&M Mars Sustainability Program, Rutgers EcoComplex, Columbus, NJ, June 2008.

"The Climate Ahead: Global Changes and Local Impacts," Industrial Advisory Board, Center for Advanced Food Technology, Rutgers University, East Brunswick, NJ, April 2008.

"The Climate Ahead: Global Changes and Local Impacts," New Jersey Natural Gas Company, Earth Day Luncheon, Wall, NJ, April 2008.

Speaker at reception sponsored by Centers for Ocean Science Education Excellence at National Science Teachers Association 2008 National Conference, Boston, MA, March 2008.

"The Climate Ahead: Global Changes and Local Impacts," Somerset Naturalists, Somerset County Library, Bridgewater, NJ, March 2008.

"The Climate Ahead: Global Changes and Local Impacts," Rutgers Environmental Stewards Program, Essex County Environmental Center, Roseland, NJ, February 2008.

"The Climate Ahead: Global Changes and Local Impacts," Rutgers Environmental Stewards Program, Atlantic County Utilities Authority, Egg Harbor Township, NJ, February 2008.

"Global Warming... It Is Later Than We Think... But Not Too Late," Pulse of the Planet lecture series, Liberty Science Center, Jersey City, NJ, January 2008.

Interviewed and quoted by *The Record* (Hackensack, NJ) in news article about relationship between current weather and climate change, January 2008.

Interviewed and quoted by *The Star-Ledger* (Newark, NJ) in news article about geoengineering, December 2007.

Interviewed and quoted by *The Whit* (Rowan University, Glassboro, NJ), in news article about expected weather during upcoming winter season, November 2007.

"Will Global Warming Turn the River Dorms into the Ocean Dorms?" Rutgers Gameday Seminar, Piscataway, NJ, October 2007.

Invited testimony on climate change to New Jersey Assembly Statewide Flooding Legislative Panel, Lodi, NJ, October 2007.

"The Climate Ahead: Global Changes and Local Impacts," Association of New Jersey Environmental Commissions, Mercer County Community College, West Windsor, NJ, October 2007.

"The Climate Ahead: Global Changes and Local Impacts," GreenFaith Advisory Council Reception, Drew University, Madison, NJ, September 2007.

Participant in panel discussion on New Jersey Network (Trenton, NJ) television program "On The Record," July 2007.

"Climate Change: Causes and Consequences," Rutgers University Safety Management Meeting, Piscataway, NJ, June 2007.

"The Rutgers Initiative on Climate Change and Environmental Impacts," Rutgers University Energy Institute Symposium, Piscataway, NJ, May 2007.

"The Challenge of Global Warming and Recycling's Impact on Greenhouse Gas Reduction," New Jersey WasteWise Business Network, South Plainfield, NJ, May 2007.

"The Climate Ahead: Changes in Hurricanes and Winter Storms?" Rutgers Coastal Climate Change Mini-Symposium, Piscataway, NJ, May 2007.

Interviewed and quoted by the *Home News Tribune* (New Brunswick, NJ) in news article about effects of climate change on the New Jersey coast, May 2007.

Interviewed by radio station NJ101.5 WKXW-FM (Trenton, NJ) about effects of climate change on the New Jersey coast, May 2007.

Invited testimony on climate change to New Jersey Senate Environment Committee, Trenton, NJ, April 2007. This testimony was the subject of newspaper articles in the *Home News Tribune* (New Brunswick, NJ) and the *Gloucester County Times* (Woodbury, NJ).

"Greenhouse Gases and Climate Change: Global Changes and Local Impacts," New Jersey Clean Air Council, Trenton, NJ, April 2007.

"The Climate Ahead: Global Changes and Local Consequences," Rutgers Trenton Public Policy Seminar Series, New Jersey State House, Trenton, NJ, March 2007.

"Climate Change: Causes and Consequences," Preconference workshop of the New Jersey Chapter of the American Water Works Association, Atlantic City, NJ, March 2007.

"Climate Change: How Will It Affect Us?" Information session about IPCC Report ("Global Warming: It's Later Than We Think, But It's Not Too Late") at Nicholas Music Center, Rutgers University, February 2007.

Interviewed and quoted by *The Star-Ledger* (Newark, NJ) in news article about pioneering climate modeler Syukuro Manabe, February 2007.

"Global Warming: Causes and Consequences," Delaware Estuary Science Conference, Cape May, NJ, January 2007.

Participant in panel discussion in New Jersey Network (Trenton, NJ) television documentary entitled "Drought and Deluge--The New Weather," January 2007.

Interviewed about relationship between recent weather and climate change by WNBC-TV (New York, NY) during "Live at Five" broadcast, and on tape during 11 PM news, January 2007.

Interviewed and quoted by *The Star-Ledger* (Newark, NJ) in news article about the NOAA Geophysical Fluid Dynamics Laboratory, December 2006.

"Global Warming: Causes and Consequences," Annual Recycling Symposium and Awards Luncheon, Association of New Jersey Recyclers, Eatontown, NJ, October 2006.

"Global Warming: Causes and Consequences," Nassau Presbyterian Church, Princeton, NJ, October 2006.

Interviewed and quoted by *The Star-Ledger* (Newark, NJ) in news article about Rutgers University climate change symposium, September 2006.

Interviewed by New Jersey Network for news story about Rutgers University climate change symposium, September 2006.

Interviewed by the Voice of America for news story on climate change entitled "Earth Heats Up As Global Warming Debate Rages," August 2006.

"Future Climate Change: Sea Level Rise, Storm Surge and the New Jersey Shore" at Academy of Natural Sciences, Philadelphia, PA., August 2006.

"Future Changes in Climate, Sea Level and Hydrology" to a meeting of the Delaware River Basin Commission, West Trenton, NJ, June 2006.

"Understanding Climate Change" at meeting of Monroe Township League of Women Voters, Monroe Township, NJ, May 2006.

"Water Resources in a Changing Climate," 2006 New Jersey Envirothon Training Workshop, Jackson, NJ, April 2006.

"Understanding Climate Change," Unitarian Universalist Congregation of Monmouth County, Lincroft, NJ, April 2006.

"Global Warming: Evidence and Controversy," Moorestown Friends School, Moorestown, NJ, November 2005.

"Global Warming: Evidence and Controversy" Philadelphia Yearly Meeting of the Religious Society of Friends, Philadelphia, PA, June 2005.

"Global Warming: Science Update," New Jersey Work Environment Council and Blue/Green Working Group, New Brunswick, NJ, 2002.

"What Every Meteorologist Should Know About Global Warming," Philadelphia-Delaware Area Chapter of the American Meteorological Society, Mount Holly, NJ, May 2002.

"Global Warming: Science Update," New Jersey Work Environment Council, Lawrenceville, NJ, March 2002.

"Detection and Monitoring of Climate Change and Trends," Commercial Refrigerator Manufacturers Meeting, Washington, DC, 1998.

"The Greenhouse Effect" New Jersey Energy and Facilities Management Exposition 1989, Secaucus, NJ, March 1989.

ORGANIZING AND CHAIRING ACTIVITIES:

Co-organizer of symposium, "The Climate Ahead: Global Changes, Local Impacts," Rutgers University, New Brunswick, NJ, September 2006.

Co-convenor of special session, "Controls of the ITCZ Position in Past Climates: Observations and Models," 2006 Joint Assembly of the American Geophysical Union, Baltimore, MD, May 2006

Co-organizer of The Suki Manabe Symposium, American Meteorological Society Annual Meeting, San Diego, California, January 2005.

Program Committee, American Geophysical Union Chapman Conference, "Mechanisms of Millennial-Scale Global Climate Change"

Co-convenor of special session, "Climate System Processes at the Last Glacial Maximum," American Geophysical Union Fall Meeting, San Francisco, CA, December 1995.

EDITORIAL ACTIVITIES:

Associate Editor, *Journal of Climate*, January 2003-present.

Editorial Advisory Board, *Quaternary Science Reviews*, January 1999-December 2002.

Editorial Board, *American Meteorological Society Glossary of Meteorology*, Second Edition, October 1996-October 2000.

Associate Editor, *Paleoceanography*, January 1996-December 1999.

GRANTS:

Rutgers University, Academic Excellence Fund, "Building the Climate and Environmental Change Initiative," Co-Principal Investigator, (Grant Amount: \$110,000), 2008-2010.

National Oceanic and Atmospheric Administration, "Evaluation of Fingerprints of Natural and Anthropogenic Climate Change," Principal Investigator, (Grant Amount: \$268,560), 2004-2007.

POSTDOCTORAL ASSOCIATES SUPERVISED:

Masakazu Yoshimori, Rutgers University, 2005-2007

Charles Jackson, Princeton University, 1998-2000

GRADUATE STUDENTS SUPERVISED:*As primary advisor*

Paul Loikith, Ph.D. in progress, Rutgers University

Michael Erb, Ph.D. in progress, Rutgers University

John Krasting, Ph.D. in progress, Rutgers University

Stephanie Weber, M.S., Rutgers University, 2005

As member of committee

Natasa Skific, Ph.D. in progress, Rutgers University (thesis committee)

Nicole Davi, Ph.D. in progress, Rutgers University (thesis committee)

Michael Foster, Ph.D. in progress, Rutgers University (thesis committee)

Sindia Sosdian, Ph.D. in progress, Rutgers University (thesis committee)

Matei Georgescu, Ph.D., Rutgers University, 2008 (thesis committee)

Chaochao Gao, Ph.D., Rutgers University, 2008 (thesis committee)

Haibin Li, Ph.D., Rutgers University, 2006 (thesis committee)

Michael Previdi, Ph.D., Rutgers University, 2006 (thesis committee)
Luke Oman, Ph.D., Rutgers University, 2006 (thesis committee)
Michael Foster, M.S., Rutgers University, 2006 (oral comprehensive committee)
Natasa Skific, M.S., Rutgers University, 2006 (thesis committee)
Rose Marie Came, Ph.D., MIT-Woods Hole Joint Program, 2005 (oral comprehensive committee)
Kristina Dahl, Ph.D., MIT-Woods Hole Joint Program, 2005 (oral comprehensive committee)
Thomas Atkins, M.S., Rutgers University, 2004 (oral comprehensive committee)
Duane Thresher, Ph.D., Columbia University, 2004 (thesis committee)
Masakazu Yoshimori, Ph.D., University of Victoria, 2001 (thesis committee)
Guido Vettoretti, Ph.D., University of Toronto, 2001 (thesis committee)
Sukeshi Sheth, Ph.D., Columbia University, 1999 (thesis committee)
Zhaomin Wang, Ph.D., McGill University, 1999 (thesis committee)

UNDERGRADUATE STUDENTS SUPERVISED:

Ross Alter, undergraduate, George H. Cook Honors Program, Rutgers University, 2008-present.
Anthony DeAngelis, undergraduate independent study, Rutgers University, 2007-2008
Ross Alter, undergraduate, Honors Tutorial, Rutgers University, 2006-2008
Dan Baur, undergraduate, Honors Tutorial, Rutgers University, 2006-2007
Paul Loikith, undergraduate independent study, Rutgers University, 2006-2007
David Porter, George H. Cook Honors Program, Rutgers University, 2005-2006
Stephanie Zick, George H. Cook Honors Program, Rutgers University, 2004-2005
Mark Papier, undergraduate independent study, Rutgers University, 2003-2004
Mark Sannutti, undergraduate independent study, Rutgers University, 2003-2004
Erica Loechl, undergraduate summer intern, Princeton University 1997
Emily Marciniak, undergraduate summer intern, Princeton University, 1993
Paul Wichansky, undergraduate summer intern, Princeton University 1992
Jennifer Eden, undergraduate summer intern, Princeton University
Gerard Dismukes, undergraduate summer intern, Princeton University 1990
Adam Finnefrock, undergraduate summer intern, Princeton University 1989

TEACHING ACTIVITIES:

Organized and led the development of a new graduate course: Fundamentals of Atmospheric Science (two-semester sequence), Rutgers University

Organized and led the development of the Graduate Program in Atmospheric Science (promoted from option to full program status), Rutgers University

Developed a new graduate course: Mechanisms of Past Climate Change, Rutgers University

Spring 2008, Fundamentals of Atmospheric Science II (30% responsibility), Rutgers University (graduate)

Spring 2008, Dynamics of the Atmosphere, Rutgers University (undergraduate)

Spring 2008, Meteorological Analysis II (50% responsibility), Rutgers University (undergraduate)

Fall 2007, Fundamentals of Atmospheric Science I (10% responsibility), Rutgers University (graduate)

Fall 2007, Mechanisms of Past Climate Change, Rutgers University (graduate)

Spring 2007, Dynamics of the Atmosphere, Rutgers University (undergraduate)

Fall 2006, Synoptic Analysis and Forecasting I, Rutgers University (undergraduate)

Fall 2006, Weather Systems, Rutgers University (undergraduate)

Spring 2006, Dynamics of the Oceans and Atmosphere, Rutgers University (undergraduate)

Fall 2005, Mechanisms of Past Climate Change, Rutgers University (graduate)

Spring 2005, Dynamics of the Oceans and Atmosphere, Rutgers University (undergraduate)

Spring 2004, Dynamics of the Oceans and Atmosphere, Rutgers University (undergraduate)

Fall 2003, Weather Systems, Rutgers University (undergraduate)

Fall 2003, Special Problems in Environmental Sciences (Topic: Mechanisms of Past Climate Change), Rutgers University (graduate)

Spring 2002, Weather and Climate Dynamics (co-instructor), Princeton University (graduate)

Spring 2000, Weather and Climate Dynamics (co-instructor), Princeton University (graduate)

Spring 1988, Weather, Climate and Environmental Design, Rutgers University (undergraduate)

Spring 1987, Weather, Climate and Environmental Design, Rutgers University (undergraduate)

Spring 1986, Weather, Climate and Environmental Design, Rutgers University (undergraduate)

Spring 1985, Weather, Climate and Environmental Design, Rutgers University (undergraduate)

Spring 1984, Weather, Climate and Environmental Design, Rutgers University (undergraduate)

Summer 1983, Elements of Meteorology, Rutgers University (undergraduate)

Spring 1983, Weather, Climate and Environmental Design, Rutgers University (undergraduate)

Spring 1982, Weather, Climate and Environmental Design, Rutgers University (undergraduate)

Spring 1981, Weather, Climate and Environmental Design, Rutgers University (undergraduate)

Spring 1980, Weather, Climate and Environmental Design, Rutgers University (undergraduate)

UNIVERSITY SERVICE

Advisory Board, Rutgers Energy Institute, 2008-present.

Rutgers University Coordinating Council on Climate and Energy, 2007-present.

Space Committee, Department of Environmental Sciences. 2007-present.

Excellence Fellowship Committee, School of Environmental and Biological Sciences, 2006-2008 (Chair, 2006-2007).

George H. Cook Honors Committee, Cook College, 2005-present.

Chair, Faculty Search Committee (two positions), Department of Environmental Sciences, 2005-2007.

Physical and Mathematical Sciences and Engineering Area Committee, The Graduate School-New Brunswick, 2005-2007.

Recruitment and Outreach Committee, Department of Environmental Sciences. 2005-2007.

Rutgers-AAUP Grievance Committee, Spring 2006.

Ad-hoc Advisory Committee on Instructional Computing, School of Environmental and Biological Sciences, Spring 2006.

Served on ad hoc tenure evaluation committee for Woods Hole Oceanographic Institution, Woods Hole, MA, Spring 2006.