VAISHALI NAIK

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Research Interests

Chemistry-Climate interactions, Atmosphere-Biosphere interactions, Global Earth System Modeling, and Climate change impacts

Education

University of Illinois at Urbana-Champaign, Illinois 1999-2003
Doctor of Philosophy, Atmospheric Science

University of Illinois at Urbana-Champaign, Illinois 1996-1999
Master of Science, Atmospheric Science

University of Delhi, Delhi, India 1992-1995
Bachelor of Science, Chemistry with Honors

Professional Experience

Project Scientist 2011-present
University Corporation for Atmospheric Research (UCAR)/NOAA Geophysical Fluid Dynamics Laboratory (GFDL)

Scientist 2009-2011
High Performance Computing Inc (HPTi)/NOAA GFDL

Research Scientist (part-time) 2008-2009
Atmos Research and Consulting, Lubbock, TX

Associate Research Scholar 2006-2007
Woodrow Wilson School, Princeton University
Program in Atmospheric and Oceanic Sciences, Princeton University

Postdoctoral Research Associate 2003-2006
Woodrow Wilson School, Princeton University

Graduate Research Fellow 2000-2003
Department of Atmospheric Sciences, University of Illinois at Urbana-Champaign

Graduate Research Assistant 1996-2000
Department of Atmospheric Sciences, University of Illinois at Urbana-Champaign

Publications

Submitted

West, J. J., S. J. Smith, R. A. Silva, **V. Naik**, Y. Zhang, Z. Adelman, M. M. Fry, S. Anenberg, L .W. Horowitz, and J.-F. Lamarque, Co-benefits of global greenhouse gas mitigation for future air quality and human health, submitted, 2013.

Fry, M. M., M. D. Schwarzkopf, Z. Adelman, **V. Naik**, W. J. Collins, and J. J. West, Net radiative forcing and air quality responses to regional CO emission reductions, *Atmos. Chem. Phys. Discuss., 12,* 33443-33488, 2012.

Naik, V., A. Voulgarakis, A. M. Fiore, L .W. Horowitz, J.-F. Lamarque, M. Lin, M. Prather, P. Young, D. Bergmann, P. J. Cameron-Smith, I. Cionni, W. J. Collins, S. B. Dalsøren, R. Doherty, V. Eyring, G.

Faluvegi, G. A. Folberth, B. Josse, Y. H. Lee, I. A. MacKenzie, T. Nagashima, T. P. C. van Noije, D. A. Plummer, M. Righi, S. T. Rumbold, R. Skeie, D. T. Shindell, D. S. Stevenson, S. A. Strode, K. Sudo, S. Szopa, and G. Zeng, Preindustrial to Present Day Changes in Tropospheric Hydroxyl Radical and Methane Lifetime from the Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP), *Atmos. Chem. Phys. Discuss., 12,* 30755-30804, 2012.

Stevenson, D. S., P. J. Young, **V. Naik**, J.-F. Lamarque, D. T. Shindell, A. Voulgarakis, R. B. Skeie, S. B. Dalsoren, G. Myhre, T. K. Berntsen, G. A. Folberth, S. T. Rumbold, W. J. Collins, I. A. MacKenzie, R. M. Doherty, G. Zeng, T. P. C. van Noije, A. Strunk, D. Bergmann, P. Cameron-Smith, D. A. Plummer, S. A. Strode, L. Horowitz, Y. H. Lee, S. Szopa, K. Sudo, T. Nagashima, B. Josse, I. Cionni, M. Righi, V. Eyring, A. Conley, K. W. Bowman, and O. Wild, Tropospheric ozone changes, radiative forcing and attribution to emissions in the Atmospheric Chemistry and Climate Model Inter-comparison Project (ACCMIP), *Atmos. Chem. Phys. Discuss., 12*, 26047-26097, 2012.

Bowman, K., D. Shindell, H. Worden, J. F. Lamarque, P. J. Young, D. Stevenson, Z. Qu, M. de la Torre, D. Bergmann, P. Cameron-Smith, W. J. Collins, R. Doherty, S. Dalsøren, G. Faluvegi, G. Folberth, L. W. Horowitz, B. Josse, Y. H. Lee, I. MacKenzie, G. Myhre, T. Nagashima, **V. Naik**, D. Plummer, S. Rumbold, R. Skeie, S. Strode, K. Sudo, S. Szopa, A. Voulgarakis, G. Zeng, S. Kulawik, and J. Worden, Observational constraints on ozone radiative forcing from the Atmospheric Chemistry Climate Model Intercomparison Project (ACCMIP), *Atmos. Chem. Phys. Discuss., 12*, 23603-23644, 2012.

Shindell, D. T., J.-F. Lamarque, M. Schulz, M. Flanner, C. Jiao, M. Chin, P. Young, Y. H. Lee, L. Rotstayn, G. Milly, G. Faluvegi, Y. Balkanski, W. J. Collins, A. J. Conley, S. Dalsoren, R. Easter, S. Ghan, L. Horowitz, X. Liu, G. Myhre, T. Nagashima, **V. Naik**, S. Rumbold, R. Skeie, K. Sudo, S. Szopa, T. Takemura, A. Voulgarakis, and J.-H. Yoon, Radiative forcing in the ACCMIP historical and future climate simulations, *Atmos. Chem. Phys. Discuss.*, 12, 21105-21210, 2012.

Naik, V., L. W. Horowitz, A. M. Fiore, P. Ginoux, J. Mao, A. Aghedo, and H. Levy II, Preindustrial to present day impact of changes in short-lived pollutant emissions on atmospheric composition and climate forcing, in revision *J. Geophys. Res*., 2012.

Kirschke, S., P. Bousquet, P. Ciasis, M. Sunois, P. Bergasmachi, et al., Three decades of methane sources and sinks: budgets and variations, in revision *Nature Geosciences*, 2012.

Peer-reviewed

Lee, Y. H., J.-F. Lamarque, M. G. Flanner, C. Jiao, D. T. Shindell, T. Berntsen, M. M. Bisiaux, J. Cao, W. J. Collins, M. Curran, R. Edwards, G. Faluvegi, S. Ghan, L. W. Horowitz, J. R. McConnell, G. Myhre, T. Nagashima, **V. Naik**, S. T. Rumbold, R. B. Skeie, K. Sudo, T. Takemura, and F. Thevenon, Evaluation of preindustrial to present-day black carbon and its albedo forcing from ACCMIP (Atmospheric Chemistry and Climate Model Intercomparison Project), *Atmos. Chem. Phys., 13*, 2607-2634, doi:10.5194/acp-13-2607-2013, 2013.

Voulgarakis, A., **V. Naik**, J.-F. Lamarque, D. T. Shindell, P. J. Young, M. J. Prather, O. Wild, R. D. Field, D. Bergmann, P. Cameron-Smith, I. Cionni, W. J. Collins, S. B. Dalsøren, R. M. Doherty, V. Eyring, G. Faluvegi, G. A. Folberth, L. W. Horowitz, B. Josse, I. A. McKenzie, T. Nagashima, D. A. Plummer, M. Righi, S. T. Rumbold, D. S. Stevenson, S. A. Strode, K. Sudo, S. Szopa, and G. Zeng, Analysis of present day and future OH and methane lifetime in the ACCMIP simulations, *Atmos. Chem. Phys., 13*, 2563-2587, doi:10.5194/acp-13-2563-2013, 2013.

Young, P. J., A. T. Archibald, K. W. Bowman, J.-F. Lamarque, **V. Naik**, D. S. Stevenson, S. Tilmes, A. Voulgarakis, O. Wild, D. Bergmann, P. Cameron-Smith, I. Cionni, W. J. Collins, S. B. Dalsøren, R. M. Doherty, V. Eyring, G. Faluvegi, L. W. Horowitz, B. Josse, Y. H. Lee, I. A. MacKenzie, T. Nagashima, D. A. Plummer, M. Righi, S. T. Rumbold, R. B. Skeie, D. T. Shindell, S. A. Strode, K. Sudo, S. Szopa, and G. Zeng, Pre-industrial to end 21st century projections of tropospheric ozone from the Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP), *Atmos. Chem. Phys., 13,* 2063-2090, 2013.

Mao, J., L. W. Horowitz, **V. Naik**, S. Fan, J. Liu, and A. M. Fiore, Sensitivity of tropospheric oxidants to wildfires: implications for radiative forcing, in press, *Geophys. Res. Lett*., 2013.

Levy II, H., L. W. Horowitz, M. D. Schwarzkopf, Y. Ming, J.-C. Golaz, **V. Naik**, and V. Ramaswamy, The roles of aerosol direct and indirect effects in past and future climate change, in press, *J. Geophys. Res*., 2013.

Lamarque, J.-F., D. T. Shindell, B. Josse, P. J. Young, I. Cionni, V. Eyring, D. Bergmann, P. Cameron-Smith, W. J. Collins, R. Doherty, S. Dalsoren, G. Faluvegi, G. Folberth, S. J. Ghan, L. W. Horowitz, Y. H. Lee, I. A. MacKenzie, T. Nagashima, **V. Naik**, D. Plummer, M. Righi, S. T. Rumbold, M. Schulz, R. B. Skeie, D. S. Stevenson, S. Strode, K. Sudo, S. Szopa, A. Voulgarakis, and G. Zeng, The Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP): overview and description of models, simulations and climate diagnostics, *Geosci. Model Dev., 6*, 179-206, doi:10.5194/gmd-6-179-2013, 2013.

Fang, Y., **V. Naik**, L. W. Horowitz, and D. L. Mauzerall, Air pollution and associated human mortality: the role of air pollutant emissions, climate change and methane concentration increases during the industrial period, *Atmos. Chem. Phys., 13,* 1377-1394, 2013.

John, J., A. M. Fiore, **V. Naik**, L. W. Horowitz, and J. Dunne, Climate versus emission drivers of methane lifetime from 1860 to 2100, *Atmos. Chem. Phys., 12*, 12021-12036, doi:10.5194/acp-12-12021-2012, 2012.

Lin, M., A. M. Fiore, O. R. Cooper, L. Horowitz, A. O. Langford, H. Levy II, B. J. Johnson, **V. Naik**, S. Oltmans, and C. Senff, Springtime, high surface ozone events over the western United States: Quantifying the role of stratospheric intrusions, *J. Geophys. Res.,* 117, D00V22, DOI:10.1029/2012JD018151*,* 2012.

Fiore, A.M., **V. Naik**, D. Spracklen, A. Steiner, N. Unger, M. Prather, D. Bergmann, P.J. Cameron-Smith, B. Collins, S. Dalsøren, G. Folberth, P. Ginoux, L.W. Horowitz, B. Josse, J.-F. Lamarque, T. Nagashima, F. O'Connor, S. Rumbold, D.T. Shindell, R.B. Skeie, K. Sudo, T. Takemura, and G. Zeng, Global Air Quality in Climate, *Chem. Soc. Rev*, doi:10.1039/c2cs35095e, 2012.

Fry, M.M., **V. Naik**, J.J. West, M.D. Schwarzkopf, A.M. Fiore, et al., The influence of ozone precursor emissions from four world regions on tropospheric composition and radiative climate forcing, *J. Geophy. Res.*, 117, D07306, DOI:10.1029/2011JD017134, 2012.

Lin, M., A. M. Fiore, L. W. Horowitz, O. R. Cooper, **V. Naik**, J. Holloway, B. J. Johnson, A. M. Middlebrook, S. J. Oltmans, I. B. Pollack, T. B. Ryerson, J. X. Warner, C. Wiedinmyer, J. Wilson, and B. Wyman, Transport of Asian ozone pollution into surface air over the western United States in spring, *J. Geophys. Res*., 117, D00V07, doi:10.1029/2011JD016961, 2012.

Rasmussen, D J., A. M. Fiore, **V Naik**, L. W. Horowitz, S. J. McGinnis, and M. G. Schultz, Surface ozone-temperature relationships in the eastern US: A monthly climatology for evaluating chemistry-climate models, *Atmos. Environ.*, 47, DOI:10.1016/j.atmosenv.2011.11.02, 2012.

Donner, L. J., B. Wyman, R. S. Hemler, L. W. Horowitz, Y. Ming, M. Zhao, J.-C. Golaz, P. Ginoux, S.-J. Lin, M. D. Schwarzkopf, J. Austin, G. Alaka, W. F. Cooke, T. L. Delworth, S. M. Freidenreich, C. T. Gordon, S. M. Griffies, I. Held, W. J. Hurlin, S. Klein, T. R. Knutsen, A. Langenhorst, H.-C. Lee, Y. Lin, B. I. Magi, S. Malyshev, P. C. D. Milly, **V. Naik**, M. J. Nath, R. Pincus, J. Ploshay, V. Ramaswamy, C. Seman, E. Shevliakova, J. J. Sirutis, W. F. Stern, R. J. Stouffer, R. J. Wilson, M. Winton, A. T. Wittenberg, F. Zeng, The Dynamical Core, Physical Parameterizations, and Basic Simulation Characteristics of the Atmospheric Component AM3 of the GFDL Global Coupled Model CM3. *J. Climate*, 24, 3484–3519. doi: http://dx.doi.org/10.1175/2011JCLI3955.1, 2011.

Lamarque, J.-F., T. C. Bond, V. Eyring, C. Granier, A. Heil, Z. Klimont, D. Lee, C. Liousse, A. Mieville, B. Owen, M. G. Schultz, D. Shindell, S. J. Smith, E. Stehfest, J. Van Aardenne, O. R. Cooper, M. Kainuma, N. Mahowald, J. R. McConnell, **V. Naik**, K. Riahi, and D. P. van Vuuren, Historical (1850–2000) gridded anthropogenic and biomass burning emissions of reactive gases and aerosols: methodology and application, *Atmos. Chem. Phys. Discuss*., *10,* 7017-7039*,* doi:10.5194/acp-10-7017-2010, 2010.

Naik, V., A. Fiore, L. Horowitz, H. B. Singh, C. Wiedinmyer, A. Guenther, J. A. de Gouw, D. B. Millet, P. D. Goldan, W. C. Kuster, and A. Goldstein, Observational constraints on the global atmospheric budget of ethanol, *Atmos. Chem. Phys., 10,* 5361-5370, doi:10.5194/acp-10-5361-2010, 2010.

West, J. J., **V. Naik**, L. Horowitz, and A. M. Fiore, Effect of regional precursor emission controls on long-range ozone transport – Part 2: Steady-state changes in ozone air quality and impacts on human mortality, *Atmospheric Chemistry and Physics, 9(16),* 6095-6107, 2009.

West, J. J., **V. Naik**, L. Horowitz, and A. M. Fiore, Effect of regional precursor emission controls on long-range ozone transport – Part 1: Short-term changes in ozone air quality, *Atmospheric Chemistry and Physics, 9(16),* 6077-6093, 2009.

Saikawa, E., **V. Naik,** L. W. Horowitz, J. Liu, D. L. Mauzerall, Present and Potential Future Contributions of Sulfate, Black and Organic Carbon Aerosols from China to Global Air Quality, Premature Mortality and Radiative Forcing, *Atmospheric Environment, 4343(17),* 2814-2822, 2009.

Fiore, A. M., J. J. West, L. W. Horowitz, **V. Naik**, and M. Daniel Schwarzkopf, Characterizing the tropospheric ozone response to methane emission controls and the benefits to climate and air quality, *Journal of Geophysical Research, 113,* D08307, doi:10.1029/2007JD009162*,* 2008.

West, J. J., A. M. Fiore, **V. Naik**, L. W. Horowitz, M. D. Schwarzkopf, and D. L. Mauzerall, Ozone air quality and radiative forcing consequences of changes in ozone precursor emissions, *Geophysical Research Letter, 34,* L06806, 10.1029/2006GL029173, 2007.

Naik, V., D. L. Mauzerall, L. W. Horowitz, M. D. Schwarzkopf, V. Ramaswamy, and M. Oppenheimer, On the sensitivity of radiative forcing from biomass burning aerosols and ozone to location of emissions, *Geophysical Research Letter, 34,* L03818, doi:10.1029/2006GL028149, 2007.

Naik, V., D. Mauzerall, L. Horowitz, D. Schwarzkopf, V. Ramaswamy, and M. Oppenheimer, Net radiative forcing due to changes in regional emissions of tropospheric ozone precursors, *Journal of Geophysical Research, 110,* doi:10.1029/2005JD005908, 2005.

Naik, V., C. Delire, and D. J. Wuebbles, The sensitivity of global biogenic isoprenoids emissions to climate variability and atmospheric CO_2, *Journal of Geophysical Research,* 109(D6), D06301, 10.1029/2003JD004236, 2004.

Naik, V., D. J. Wuebbles, E. DeLucia, and J. A. Foley, Influence of geoengineered climate on the terrestrial biosphere, *Environmental Management*, doi 10.1007/s00267-003-2993-7, 2003.

Jain, A. K., Z. Li, **V. Naik**, and D. J. Wuebbles, Evaluation of the atmospheric lifetime and radiative forcing on climate for 1,2,2,2-tetrafluoroethyl trifluoromethyl ether $CF_3OCHFCF_3$, *Journal of Geophysical Research*, 106(D12), 12615-12618, 2001.

Li, Z., Z. Tao, **V. Naik**, D. A. Good, J. C. Hansen, G. –R., Jeong, J. S. Francisco, A. K. Jain, and D. J. Wuebbles, Global warming potential assessment for $CF_3OCF{=}CF_2$, *Journal of Geophysical Research,* 105(D3), 4019-4029, 2000.

Naik, V., A. K. Jain, K. O. Patten, and D. J. Wuebbles, Consistent sets of atmospheric lifetimes and radiative forcings on climate for CFC replacements: HCFCs and HFCs, *Journal of Geophysical Research,* 105(D5), 6903-6914, 2000.

Conference Proceedings

Wuebbles, D. J., **V. Naik**, K. Hayhoe, and A. Jain, Interactive nature of biosphere processes, atmospheric chemistry and climate: methane, a case study. *Proceedings of the Millennium Symposium on Atmospheric Chemistry: Past, Present, and Future of Atmospheric Chemistry*, American Meteorological Society, Boston, MA, 2001.

Dissertation

Naik, V, Interactions of terrestrial biosphere with climate and atmospheric chemistry, *Ph.D. Dissertation*, University of Illinois at Urbana-Champaign, October 2003.

Naik, V., Effects of Chlorofluorocarbon and Halon Replacement Compounds on the Global Environment, *M. S. Thesis in Atmospheric Sciences*, University of Illinois at Urbana-Champaign, May 1999.

Book Chapters, and Reports

Hayhoe, K., J. VanDorn, **V. Naik**, D. Wuebbles, Climate change in the Midwest: projections of future temperature and precipitation, *Technical report on Midwest Climate Impacts for the Union of Concerned Scientists*, 2009.

Wake, C., E. Burakowski, K. Hayhoe, C. Watson, E. Douglas, J. VanDorn, **V. Naik**, C. Keating, Climate Change in the Casco Bay Watershed: past present, and future, *Report for the Casco Bay Estuary Partnership*, December 2009.

Wuebbles, D. J., **V. Naik**, A. K. Jain, and K. O. Patten, Lifetimes and GWPs of replacement compounds: final report on new evaluations. *Report for the Alternative Fluorocarbon Environmental Acceptability Study*, 1999.

Wuebbles, D. J., A. K. Jain, R. Kotamarthi, **V. Naik**, and K. O. Patten, Replacements for CFCs and Halons and their effects on stratospheric ozone in *Recent Advances in Stratospheric Processes*, Nathan and Cordero (Eds), Research Signpost, Kerala, India, 1998.

Presentations

Naik, V., A. Voulgarakis, and the ACCMIP Team, Preindustrial to present-day changes in OH and methane lifetime – preliminary results, ACCMIP 2nd Meeting, Pasadena, CA, January, 2012.

Naik, V., L. Horowitz, A. Fiore, and Hiram Levy II, Impact of reducing short-lived air pollutants on atmospheric composition and climate, 2010 American Geophysical Union Fall Meeting, Dec 13-17, San Francisco, CA, 2010.

Naik, V., A. Fiore, L. Horowitz, H. Singh, C. Wiedinmyer, A. Guenther, J. A. de Gouw, D. B. Millet, H. Levy, and M. Oppenheimer, Observational constraints on the global budget of ethanol, 2007 American Geophysical Union Fall meeting, Dec 10-14, San Francisco, CA, 2007.

Naik, V., D. L. Mauzerall, L. W. Horowitz, D. Schwarzkopf, V. Ramaswamy, and M. Oppenheimer, The sensitivity of radiative forcing from biomass burning aerosols and ozone to emission location, 2006 American Geophysical Union Fall meeting, Dec 11-15, San Francisco, CA, 2006.

Naik, V., D. L. Mauzerall, L. W. Horowitz, D. Schwarzkopf, V. Ramaswamy, and M. Oppenheimer, Net radiative forcing due to changes in regional emissions of tropospheric ozone precursors, Mitigation of air pollution and climate change in China: A policy workshop on co-benefits and co-control, November 22-23, Bejing, China, 2005.

Naik, V., D. L. Mauzerall, L. W. Horowitz, D. Schwarzkopf, V. Ramaswamy, and M. Oppenheimer, Sensitivity of global tropospheric O_3 distribution and its radiative forcing to regional biomass burning emissions, 2005 Joint Assembly, May 23-27, New Orleans, LA, 2005.

Naik, V., D. L. Mauzerall, L. W. Horowitz, D. Schwarzkopf, V. Ramaswamy, and M. Oppenheimer, Attribution of regional radiative forcing due to tropospheric O_3: A step towards climate credit for reductions in emissions of O_3 precursors, Air Pollution as a Climate Forcing: A Second Workshop, April 4-6, Honolulu, HI, 2005.

Naik, V., D. L. Mauzerall, L. W. Horowitz, D. Schwarzkopf, V. Ramaswamy, and M. Oppenheimer, Regional attribution of ozone production and associated radiative forcing: a step to crediting NO_x emission reductions, American Geophysical Union Fall meeting, December 13-17, San Francisco, CA, 2004.

Naik, V., D. L. Mauzerall, L. W. Horowitz, D. Schwarzkopf, V. Ramaswamy, and M. Oppenheimer, Regional attribution of ozone production and associated radiative forcing: a step to crediting ozone reductions, 8th International Global Atmospheric Chemistry Conference, September 4-9, Christchurch, New Zealand, 2004.

Naik, V., Interactions of the Terrestrial Biosphere with Climate and Atmospheric Chemistry, Department of Atmospheric Sciences Seminar Series, University of Illinois at Urbana-Champaign, IL, 2003.

Naik, V., C. Delire, and D. J. Wuebbles, Modeling the climate variability of biogenic isoprene and monoterpenes, American Geophysical Union Fall meeting, December 6-10, San Francisco, CA, 2002.

Wuebbles, D. J., V. Naik, E. DeLucia, and J. A., Foley, Influence of geoengineered climate on the terrestrial biosphere, American Geophysical Union Fall meeting, December 10-14, San Francisco, CA, 2001.

Naik, V., Potential feedbacks and interactions between biogeochemical cycles and climate change with emphasis on methane, Workshop on Atmospheric Composition, Biogeochemical Cycles and Climate Change, Aspen Global Change Institute, Aspen 2000.

Naik, V., D. J. Wuebbles, K. O. Patten, and A. K. Jain, Effects of CFC and Halon Replacements on the Global Environment, American Geophysical Union Fall Meeting, San Francisco, CA, 1998.

Naik, V., Effects of CFC and Halon replacements on Global Environment, Department of Atmospheric Sciences Seminar Series, University of Illinois, 1998.

Professional Activities

- ***Contributing Author*** to the Intergovernmental Panel on Climate Change Fifth Assessment Report Climate Change 2013: The Physical Science Basis (IPCC-AR5 Working Group I), 2012.
- ***Member,*** GFDL Computer User's Advisory Board (CUAB), 2010-2013.
- ***Treasurer,*** GFDL Employees Association (GFDLEA), 2010-2011.
- ***Doctoral Committee Member*** for Meredith M. Fry (Dept. of Environmental Sciences and Engineering, University of North Carolina), 2010-2013.
- ***Participant*****,** Dissertations Initiative for the Advancement of Climate Change Research (DISCCRS II), March 26–April 2 2006, Pacific Grove, CA.
- ***Undergraduate Thesis Co-supervisor*** for Allison Stone, Undergraduate student at Department of Geosciences, Princeton University, 2005-2006.
- ***Co-convener*** of special session in 2005 Joint Assembly, May 23-27, New Orleans, LA.
- ***Ad-hoc Reviewer*** for research papers submitted for publication in Atmospheric Chemistry and Physics, Earth Interactions, Environmental Science & Technology, Geophysical Research Letters, Global Environmental Change, and Journal of Geophysical Research.
- ***Reviewer*** for research proposals submitted for funding to National Science Foundation, National Aeronautics and Space Administration.
- ***Member,*** American Geophysical Union (AGU), Earth System Women's Network (ESWN), Sound Science Initiative of Union of Concerned Scientists, and Phi Kappa Phi
- ***Guest lecturer*** for Global Biogeochemical Cycles, a graduate level course in the Department of Atmospheric Sciences
- ***Student Representative***, Department of Atmospheric Sciences, UIUC, 2001-2002.
- ***Student Member***, Department of Atmospheric Sciences, UIUC, Admissions/Recruitment Committee, 2001-2002.

Honors

NASA Graduate Student Fellowship in Earth System Science 2000-2003

Technical Skills

- Windows, UNIX (ORIGIN 2000, HP, IBM, SGI altix, Cray XE6), LINUX, MacOS

- Fortran 77/90, HTML, Interactive Data Language (IDL), NCAR Command Language (NCL), R, GrADS, NCO, NetCDF, some experience with MPI, OpenMP
- Microsoft Office Suite, Kaleidagraph, Adobe Illustrator, ImageMagick