



Allison Steiner

University of Michigan  
Department of Atmospheric, Oceanic and Space Sciences  
Space Research Building, 2455 Hayward Street  
Ann Arbor, MI 48109-2143  
Phone 734.764.5150 Fax 734.936.0503  
alsteiner@umich.edu  
<http://www-personal.umich.edu/~alsteine/>

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EDUCATION

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**Georgia Institute of Technology**, Atlanta, GA 2003  
Ph.D. in Atmospheric Science  
Minor: Geographic Information Systems (GIS) and Remote Sensing  
Title: The influence of atmospheric chemistry and climate on biosphere-atmosphere interactions  
Advisor: William L. Chameides

**Johns Hopkins University**, Baltimore, MD 1994  
B.S. in Chemical Engineering

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PROFESSIONAL INTERESTS

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Biosphere-atmosphere interactions, regional climate modeling, chemistry-climate interactions, atmospheric aerosols, and biogenic VOC emissions

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RESEARCH EXPERIENCE

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**Assistant Professor** 2006-present  
University of Michigan, Ann Arbor, MI  
Department of Atmospheric, Oceanic and Space Sciences

**Postdoctoral Research Fellow** 2003-2006  
University of California, Berkeley, Berkeley, CA  
Department of Environmental Science, Policy and Management

**Visiting Scientist** August 2003  
National Center for Atmospheric Research, Boulder, CO  
Atmospheric Chemistry Division

**Research Assistant** 1997-2003  
Georgia Institute of Technology, Atlanta, GA  
School of Earth and Atmospheric Sciences

**Visiting Scientist** May-Sept. 2001  
International Centre for Theoretical Physics, Trieste, Italy  
Physics of the Weather and Climate Group

**Visiting Scientist** 2000  
International Institute for Applied Systems Analysis, Laxenburg, Austria  
Young Scientists' Summer Program 2000

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PUBLICATIONS

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**Steiner, A.L.**, J.S. Pal, S.A. Rauscher, J.L. Bell, N.S. Diffenbaugh, A. Boone, L.C. Sloan and F. Giorgi, Land surface coupling in regional climate simulations of the West African monsoon, *Climate Dynamics*, in review.

Giorgi, F., N.S. Diffenbaugh, X.J. Gao, E. Coppola, S.K. Dash, O. Frumento, S.A. Rauscher, A. Remedio, I. Seidou Sanda, **A. Steiner**, B. Sylla and A.S. Zakey (2008) The Regional Climate Change Hyper-Matrix Framework, *Eos*, *89* (45), 445–446.

**Steiner, Allison L.**, R.C. Cohen, R.A. Harley, S. Tonse, D.B. Millet, G.W. Schade and A.H. Goldstein (2008) VOC reactivity in central California: Comparing an air quality model to ground-based measurements, *Atmos. Chem. Phys.*, *8*, 351–368.

Pal, J.S., F. Giorgi, X. Bi, N. Elguindi, F. Solmon, X. Gao, R. Francisco, A. Zakey, J. Winter, M. Ashfaq, F.S. Syed, J.L. Bell, N.S. Diffenbaugh, J. Karmacharya, A. Konare, D. Martinez, R.P. da Rocha, L. C. Sloan and **A.L. Steiner** (2007) Regional climate modeling for the developing world: The ICTP RegCM3 and RegCNET, *Bull. Amer. Meteorol. Soc.*, *88*, 9, 1395–1409.

**Steiner, Allison L.** and Allen H. Goldstein (2007). Biogenic volatile organic compounds, in *Volatile Organic Compounds in the Atmosphere*, ed. Ralf Koppmann, Blackwell Publishing, Ltd, p. 82–128.

**Steiner, Allison L.**, S. Tonse, R.C. Cohen, A.H. Goldstein, and R.A. Harley (2007) Biogenic 2-methyl-3-buten-2-ol increases regional ozone and HOx sources, *Geophys. Res. Lett.*, *34*, L15806, doi:10.1029/2007GL030802.

**Steiner, Allison L.**, S. Tonse, R.C. Cohen, A.H. Goldstein, and R.A. Harley (2006), Influence of future climate and emissions on regional air quality in California, *JGR-Atmospheres* *111*, D18303, doi: 10.1029/2005JD006935.

**Steiner, Allison L.** and W.L. Chameides (2005). Aerosol-induced thermal effects increase modeled terrestrial photosynthesis and transpiration. *Tellus*, *57B*, 404–411.

**Steiner, Allison L.**, J. Pal, F. Giorgi, R.E. Dickinson and W.L. Chameides (2005). Coupling of the Common Land Model (CLM0) to a regional climate model (RegCM). *Theoretical and Applied Climatology*, *82*, 3–4, 225–243.

**Steiner, Allison**, Luo Chao, Yan Huang and W.L. Chameides (2002) Past and present-day biogenic volatile organic compound emissions in East Asia, *Atmospheric Environment*, *36*, 31, 4895–4905.

Chameides, W.L., H. Yu, S.C. Liu, M. Bergin, X. Zhou, L. Mearns, G. Wang, C.S. Kiang, R. D. Saylor, C. Luo, Y. Huang, **A. Steiner** and F. Giorgi (1999) Case study of the effects of atmospheric aerosols and regional haze on agriculture: An opportunity to enhance crop yields in China through emission controls? *Proceedings of the National Academy of Sciences*, *26*, 13626–13633.

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AWARDS

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DISCCRS II Participant	2006
Early Career Award, Gordon Conference for Biogenic Hydrocarbons	2004
ACCESS VII (Atmospheric Chemistry Colloquium for Emerging Senior Scientists) Participant	2003
Early Career Award, Gordon Conference for Atmospheric Chemistry	2003
NCAR Atmospheric Chemistry Division Fellowship	2003
NASA Earth System Science Fellowship	2000–2003
Senior Dean's Fellow Award, School of Earth & Atmospheric Sciences, Georgia Tech	2002
Young Scientists' Summer Fellowship, IIASA	2000
William B. Rhodes Graduate Fellowship, School of Earth & Atm. Sciences, Georgia Tech	1999–2000

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INVITED PRESENTATIONS

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**Steiner, Allison**, RegCM3–CLM3: Land surface modeling in RegCM and impact on aerosols, Workshop on Aerosol–Climate Interactions, Hurghada, Egypt, February 2008.

**Steiner, Allison**, Biogenic VOC emissions modeling: Implications for aerosol formation, Workshop on Aerosol–Climate Interactions, Hurghada, Egypt, February 2008.

**Steiner, Allison**, Atmospheric chemistry and climate change: The role of volatile organic compounds (VOC) in central California, Department of Chemistry, Kent State University, January 2008.

**Steiner, Allison**, Atmospheric chemistry and climate change: The role of volatile organic compounds (VOC) in central California, Department of Geosciences, University of Houston, November 2007.

**Steiner, Allison**, Atmospheric chemistry and climate change: The role of volatile organic compounds (VOC) in central California, Department of Chemistry, Western Michigan University, October 2007.

**Steiner, Allison**, The influence of the biosphere on chemistry–climate interactions, Department of Atmospheric, Ocean and Space Sciences, University of Michigan, March 2006.

**Steiner, Allison**, The influence of climate change and future emissions on regional air quality in California, NASA Goddard Space Flight Center, February 2006.

**Steiner, Allison**, The influence of climate change on regional air quality in California, Lawrence Livermore National Laboratory, Livermore, CA, November 2005.

**Steiner, Allison**, The influence of climate change on regional air quality in California, NASA Ames Research Center, Moffett Field, CA, November 2005.

**Steiner, Allison** and W.L. Chameides. Aerosol induced thermal effects increase modeled terrestrial photosynthesis and transpiration, ACCESS VII Colloquium, Yellowstone National Park, 2003.

**Steiner, Allison** and W.L. Chameides. Coupling of the Common Land Model (CLM0) to a regional climate model and aerosol–climate interactions, Workshop on the Theory and Use of Regional Climate Models, International Centre for Theoretical Physics, Trieste, Italy, 2003.

**Steiner, Allison** and W.L. Chameides. The effects of biogenic VOC emissions in East Asia, Workshop on the Transport of Air Pollutants in Asia, International Institute for Applied Systems Analysis, Laxenburg, Austria, September 2000.

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OTHER PROFESSIONAL PRESENTATIONS

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**Steiner, Allison L.**, J.S. Pal, J.L. Bell, N.S. Diffenbaugh, S.A. Rauscher, F. Giorgi and L.C. Sloan, Land surface coupling in regional climate simulations of tropical monsoon systems, Fourth ICTP Workshop on the Theory and Use of Regional Climate Models, Trieste, Italy, 2008.

**Steiner, Allison L.**, J.S. Pal, J.L. Bell, N.S. Diffenbaugh, S.A. Rauscher, F. Giorgi and L.C. Sloan, Land surface coupling in regional climate simulations of tropical monsoon systems, *EOS Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract GC23B-06, 2007.

**Steiner, Allison L.**, R.C. Cohen, R.A. Harley, S. Tonse and A.H. Goldstein, VOC reactivity in central California: Comparing an air quality model to ground-based measurements, Gordon Research Conference on Atmospheric Chemistry, Big Sky, MT, 2007.

**Steiner, Allison L.**, S. Tonse, R.C. Cohen, A.H. Goldstein, and R.A Harley, Biogenic 2-methyl-3-buten-2-ol increases regional ozone and HO<sub>x</sub> sources, Gordon Research Conference on Biogenic Hydrocarbons and the Atmosphere, Ventura, CA, 2007.

**Steiner, Allison L.**, S. Tonse, R.C. Cohen, A.H. Goldstein, and R.A Harley, Oxygenated volatile organic compounds dominate reactivity in central California, *EOS Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract A11A-0821, 2006.

**Steiner, Allison L.**, S. Tonse, R.C. Cohen, A.H. Goldstein, and R.A Harley, Future Climate Alters VOC Reactivity and Potential Ozone Control Strategies in Central California, California Climate Change Research Conference, Sacramento, CA, 2006.

**Steiner, Allison L.**, S. Tonse, R.C. Cohen, A.H. Goldstein, and R.A Harley, The influence of climate change on regional air quality in California, *American Meteorological Society Eighth Conference on Atmospheric Chemistry*, Atlanta, GA, 2006.

**Steiner, Allison L.**, S. Tonse, R.C. Cohen, A.H. Goldstein, and R.A Harley, The influence of climate change on biogenic VOCs and regional air quality in California, *First Integrated Land Ecosystem-Atmosphere Processes Study (iLEAPS) Science Conference*, Boulder, CO, 2006.

**Steiner, Allison L.**, S. Tonse, R.C. Cohen, A.H. Goldstein, and R.A Harley, The influence of climate change on biogenic VOCs and regional air quality in California, *EOS Trans. AGU*, 86(52), Fall Meet. Suppl., Abstract A32A-02, 2005.

**Steiner, Allison L.**, S. Tonse, R.C. Cohen, A.H. Goldstein, and R.A. Harley, The influence of climate change on air quality in California, California Climate Change Research Conference, Sacramento, CA, 2005.

**Steiner, Allison**, R. Harley, S. Tonse, R. Cohen and A.H. Goldstein, Developing a regional climate scenario for air quality simulations in California, *Eos Trans. AGU*, 85(47), Fall Meet. Suppl., Abstract A53B-0896, 2004.

**Steiner, Allison**, M.M. Lunden, L. Misson, G. Shade and A.H. Goldstein. Can atmospheric aerosols influence MBO emissions in the Sierra Nevada?, Gordon Conference on Biogenic Hydrocarbons and the Atmosphere, Il Ciocco, Italy, 2004.

**Steiner, Allison** and W.L. Chameides. Aerosol induced thermal effects increase modeled terrestrial photosynthesis and transpiration, Gordon Conference on Atmospheric Chemistry, Big Sky, MT, 2003.

**Steiner, Allison** and W.L. Chameides. Scaling a process-based isoprene emissions model to a regional level, Gordon Conference on Biogenic Hydrocarbons and the Atmosphere, Oxford, UK, 2002.

**Steiner, Allison** and W.L. Chameides, Can climate policy influence biogenic VOC emissions?, *Eos. Trans. AGU*, 83, Spring Meet. Suppl., Abstract A42C-03, 2002.

**Steiner, Allison** and Filippo Giorgi. The coupling of the Common Land Model (CLM) to a regional climate model, *Eos. Trans. AGU*, 82, Fall Meet. Suppl., Abstract B42A-11, 2001.

**Steiner, A.L.**, Luo Chao, Yan Huang, R.D. Saylor and W.L. Chameides. The effects of land cover change on biogenic VOC emissions in China, *Eos. Trans. AGU*, 80, Suppl., Abstract A12A-11, 1999.

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#### TEACHING EXPERIENCE

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##### **University of Michigan**

AOSS 605.004: Boundary Layer Meteorology Winter 2007, 2008  
3 credit Graduate and upper-level undergraduate course

AOSS/GEO 320: Earth System Evolution Fall 2007  
4 credit Undergraduate introductory Earth System Science course

##### **Guest Lecturer**

Johns Hopkins University, Introduction to Chemical and Biomolecular Engineering 2003-2005

##### **Teaching Assistant**

Georgia Institute of Technology, Introduction to Earth Sciences 2000

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#### PROFESSIONAL ACTIVITIES

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- Member, American Geophysical Union, 1998-present
- Board member and co-Founder, Earth Sciences Women's Network (ESWN)
- Reviewer for *JGR-Atmospheres*, *Geophysical Research Letters*, *Atmospheric Environment*, *Earth Interactions*, *Monthly Weather Review*, *Atmospheric Chemistry and Physics*, *Journal of Applied Meteorology and Climate*, *Tellus*, National Science Foundation, Environmental Protection Agency, NASA
- Engineer-in-Training Certificate, 1994
- Invited panelist, EPA Workshop: Develop a Strategy for Characterizing, Quantifying, and Communicating Uncertainties: Assessment of the Effects of Global Change on U.S. Regional Air Quality, October 2006
- Invited participant, University of Michigan workshop, "Coping with Climate Change", May 2007
- Invited participant, NSF-funded workshop "Biogenic Secondary Organic Aerosols: Observations to Global Modeling", July 2007
- Invited participant, NCAR Junior Faculty Forum, "Future Scientific Directions: Geophysical and statistical challenges in detection/attribution of regional climate change", July 2007