
Elisabeth J. Moyer

DEPT. OF THE GEOPHYSICAL SCIENCES
UNIVERSITY OF CHICAGO

5734 S. ELLIS AVE.
CHICAGO, IL 60637

• TEL: 773. 834. 2992
• FAX: 773. 702. 9505

• moyer@uchicago.edu
• <http://www.geosci.uchicago.edu/moyer>

EDUCATION

Ph.D., Planetary Science, California Institute of Technology, 2001
(*minor: Environmental Engineering*)

B.S., Physics, *with honors*, Stanford University, 1990

A.B., Anthropology (*Archaeology*), *with honors*, Stanford University, 1990

POSITIONS HELD

Assistant Professor, University of Chicago, 2007–present
Dept. of the Geophysical Sciences

Research Associate, Harvard University, 2003–2007
Dept. of Chemistry and Chemical Biology

Postdoctoral Scholar, Harvard University, 2001–2003

HONORS AND AWARDS

Awardee, Camille and Henry Dreyfus Foundation Postdoctoral Program in Environmental
Chemistry, 2010

NASA Group Achievement Award, TC4 mission, 2008

NASA Group Achievement Award, SAGE III Science Team, 2001

NOAA Postdoctoral Fellowship in Climate and Global Change, 2000

NASA Group Achievement Award, POLARIS mission, 1998

NASA Graduate Fellowship in Global Change Science, 1995

NSF Graduate Fellowship, 1992

Phi Beta Kappa, 1989

President's Award, 1987, Stanford University

SCIENCE LEADERSHIP

Mission scientist, ISOCLOUD campaign, 2010-2013

Co-director, U. Chicago Center for Robust Decision-making on Climate and Energy Policy
(RDCEP), 2009-present. *Leader: Climate Group, Education Program*

SELECTED INVITED PRESENTATIONS, CONFERENCES AND WORKSHOPS

Telluride Workshop on Clouds and Aerosols (Telluride, CO), Aug. 2014

*Workshop on Advances in Observations, Models, and Measurement Techniques of Atmo-
spheric Water Vapor Isotopes (Gif-Sur-Yvette, France), Oct. 2013*

V.M. Goldschmidt Conference (Florence, Italy), Aug. 2013

- Gordon Conference on Radiation and Climate (New London, NH), July 2013
“The isotopic composition of water vapor and relevance to cloud processes”
- Heraeus Workshop on Water Vapor and Clouds (Bad Honnef, Germany), June 2013
“Uses for the isotopic composition of water vapor in cirrus and cloud physics”
- American Geophysical Union Fall Meeting (San Francisco, CA), Dec. 2012
“Insights from measurements of atmospheric water isotopic composition”
- IIES Conference on Climate and the Economy (Steningevik, Sweden), Sept. 2012
Discussant: “A global climate-economy model with high regional resolution”
- Hitran Conference (Reims, France), August 2012
“Field applications of laser-based absorption spectroscopy for measurements of atmospheric water vapor isotopic composition”
- NOAA Climate and Global Change Postdoctoral Program 20th Anniversary Celebration (Washington, DC), April 2011. *“From cold clouds to climate policy options”*
- American Geophysical Union Fall Meeting (San Francisco, CA), Dec. 2010
“Seasonal and regional variation in UTLS convective water transport from ACE isotopic measurements”
- WAVACS Workshop on Water Isotopologues in the Atmosphere (Paris, France), Apr. 2010
“Isotopic signatures of deep convection from ACE”
- FLAIR (Field Laser Applications in Industry and Research) International Confence (Florence, Italy), Sep. 2007
“The Harvard ICOS Isotope Instrument”
- International Workshop on Upper Tropospheric Humidity (Karlsruhe, Germany), June 2007
“The isotopic implications of supersaturation”
- SPARC-GEWEX/GCSS-IGAC Invitational Workshop on Deep Convection and the TTL (Victoria, B.C.), June 2006
“First in-situ measurements of water vapor isotopic composition across the tropical tropopause”
- Gordon Conference on Atmospheric Chemistry (Newport, RI), June 2001
Discussion leader: “Stratospheric chemistry and dynamics – water vapor transport”
- American Geophysical Union Fall Meeting (San Francisco, CA), Dec. 1998
“WISP (Water Isotope SPectrometer): a tunable diode laser spectrometer for diagnosis of transport and water vapor origin in the uppermost troposphere by measurement of water vapor isotopic composition”

SELECTED INVITED PRESENTATIONS, ACADEMIC DEPARTMENTS AND PROGRAMS

- Univ. of Illinois Urbana-Champaign, Dept. of Atmospheric Sciences, Nov. 2013*
- Princeton, Dept. of Civil and Environmental Engineering, April 2013
- Univ. of Utah, Global Change & Sustainability Center, April 2013
- NASA-Goddard Institute of Space Sciences, March 2013
- Karlsruhe Institute of Technology, Oct. 2012
- University of Washington, Dept. of Atmospheric Sciences, June 2012
- Carnegie-Mellon, Dept. of Engineering and Public Policy, June 2012
- Caltech, Dept. of Geological and Planetary Sciences, March 2012
- University of Copenhagen, Niels Bohr Institute, Centre for Ice and Climate, Apr. 2010
- ETH, Institute for Atmospheric and Climate Science, March 2010
- Cambridge University, Dept. of Earth Sciences, Sep. 2009
- Illinois Institute of Technology, Dept. of Chemistry, Oct. 2008
- University of Michigan, Dept. of Atmospheric, Ocean, and Space Science, Nov. 2007

University of Colorado, Boulder, Dept. of Chemistry, Nov. 2006
 Massachusetts Institute of Technology, Dept. of Earth, Atmos., and Planetary Sci., Feb. 2006
 University of Arizona, Dept. of Atmospheric Sciences, Nov. 2005
 University of California, Berkeley, Dept. of Atmospheric Sciences, Oct. 2005

AIRCRAFT AND BALLOON FIELD CAMPAIGNS

AquaVIT-2 (*Water Vapor Validation and Instrument Tests*).
 AIDA Aerosol and Cloud Chamber, Karlsruhe, Germany, Apr. 2013
Instrument PI, Chicago Water Isotope Spectrometer
 ISOCLOUD (*ISOTopic CLOUD experiments*).
 AIDA Aerosol and Cloud Chamber, Karlsruhe, Germany, 2011–2013
Mission Scientist; Instrument PI, Chicago Water Isotope Spectrometer
 CR-AVE (*Costa Rica Aura Validation Experiment*). San Jose, Costa Rica, Jan.–Feb. 2006
 AVE-WIIF (*Aura Validation Experiment / Water Isotope Intercomparison Flights*).
 Houston, TX, Jun.–Jul. 2005
 Harvard Isotope Instrument test flights. Houston, TX, Nov. 2004–Jan. 2005
 CWVCS (*Clouds and Water Vapor in the Climate System*)
 San Jose, Costa Rica, Jul.–Aug. 2001
 ACCENT (*Atmospheric Chemistry of Combustion Emissions Near the Tropopause*)
 + *WISP test flights*. Houston, TX, Aug.–Sept. 1999
 OMS (*Observations of the Middle Stratosphere*). Juazeiro do Norte, Brazil, Nov. 1997
 OMS (*Observations of the Middle Stratosphere*). Ft. Sumner, NM, Oct. 1997
 POLARIS (*Photochemistry of Ozone Loss in the Arctic Region In Summer*)
 Fairbanks, AK, Mar.–Sep. 1997

PUBLICATIONS

- “Climate impacts on economic growth as drivers of uncertainty in the social cost of carbon.” E.J. Moyer, M.D. Woolley, M.J. Glotter, D.A. Weisbach. *Submitted to Climatic Change*, 2013.
- “Evaluation of the utility of dynamical downscaling in agricultural impacts projections” M. Glotter, J. Elliott, D. McInerney, N. Best, D. Kelly, I. Foster, and E. Moyer. *In review at PNAS*, 2013.
- “Statistical emulation of climate model projections based on precomputed GCM runs”, S. Castruccio, D.J. McInerney, M.L. Stein, F. Liu, R.L. Jacob, and E.J. Moyer. *In revision at J. Clim.*, 2013.
- “Modelling and interpreting the isotopic composition of water vapour in convective updrafts”, M. Bolot, B. Legras, and E.J. Moyer. *Atmos. Chem. Phys.* 13, doi:10.5194/acp-13-7903-2013, 2013.
- “Direct and disequilibrium effects on precipitation in transient climates.” D.J. McInerney and E.J. Moyer. *In revision at Atmos. Chem. Phys.*. Discussion paper at *ACPD* 12, doi:10.5194/acpd-12-19649-2012, 2012.
- “Feasibility of U.S. renewable portfolio standards under cost caps and case study for Illinois.” S.D. Johnson and E.J. Moyer. *Energy Policy* 49, doi:10.1016/j.enpol.2012.06.047, 2012.
- “Global variations of HDO and HDO/H₂O ratios in the UTLS derived from ACE-FTS satellite measurements,” W.J. Randel, E.J. Moyer, M. Park, E.J. Jensen, P.F. Bernath, K.A. Walker, C.D. Boone. *J. Geo Res.* 117, doi:10.1029/2011JD016632, 2012.

- “The social evaluation of intergenerational policies and its application to integrated assessment models of climate change.” Kaplow, L, E.J. Moyer, and D.A. Weisbach. *B.E. Journal of Economic Analysis and Policy* 10, doi:10.2202/1935-1682.2519, 2010. Also published as a chapter in “*Distributional aspects of climate and energy policies*”, M.A. Cohen, D. Fullerton, R.H. Topel, eds., Edward Elgar Publishing Inc., Northampton, MA, 2013.
- “CIM-EARTH: Framework and case study.” J.W. Elliott, I.T. Foster, K.L. Judd, E.J. Moyer, T.S. Munson. *B.E. Journal of Economic Analysis and Policy* 10, doi:10.2202/1935-1682.2531, 2010. Also published as a chapter in “*Distributional aspects of climate and energy policies*”, M.A. Cohen, D. Fullerton, R.H. Topel, eds., Edward Elgar Publishing Inc., Northampton, MA, 2013.
- “The influence of convection on the water isotopic composition of the TTL and tropical stratosphere.” D.S. Sayres, L. Pfister, T.F. Hanisco, E.J. Moyer, M. Legg, A.S. O’Brien, J.B. Smith, J.M. St. Clair, E.M. Weinstock, M. Witinski, J.G. Anderson. *J. Geo. Res.* 115, doi:10.1029/2009JD013100, 2010.
- “Validation of the Harvard Lyman-alpha in situ water vapor instrument: Implications for the mechanisms that control stratospheric water vapor.” E.M. Weinstock, J.B. Smith, D.S. Sayres, Pittman, J.V., Spackman, J.R., Hints, E.J., Hanisco, T.F., Moyer, E.J., St. Clair, J.M., Sargent, M.R., Anderson, J.G. *J. Geophys. Res.* 114, doi:10.1029/2009JD012427, 2009.
- “A new cavity based absorption instrument for detection of H₂O, HDO, H₂¹⁸O, H₂¹⁷O, and CH₄.” D.S. Sayres, E.J. Moyer, T.F. Hanisco, J.M. St. Clair, F.N. Keutsch, A. O’Brien, N.T. Allen, L. Lapson, J.N. Demusz, M. Rivero, T. Martin, M. Greenberg, C. Tuozzolo, G.S. Engel, J.H. Kroll, J. Paul, and J.G. Anderson. *Rev. Sci. Instr.* 80, doi:10.1063/1.3117349, 2009.
- “Design considerations in high-sensitivity off-axis integrated cavity output spectroscopy.” E.J. Moyer, D.S. Sayres, T.F. Hanisco, J.M. St. Clair, F.N. Keutsch, N.T. Allen, G.S. Engel, J.H. Kroll, J. Paul, and J.G. Anderson. *App. Phys. B* 92, doi:10.1007/s00340-008-3137-9, 2008.
- “A new photolysis laser-induced fluorescence instrument for the detection of H₂O and HDO in the lower stratosphere.” J.M. St. Clair, T.F. Hanisco, E.M. Weinstock, E.J. Moyer, D.S. Sayres, F.N. Keutsch, J.H. Kroll, J.N. Demusz, N.T. Allen, J.B. Smith, J.R. Spackman, and J.G. Anderson. *Rev. Sci. Instrum.* 79, doi:10.1063/1.2940221, 2008.
- “Formation of large (similar or equal to 100 μm) ice crystals near the tropical tropopause” E.J. Jensen, L. Pfister, T.V. Bui, P. Lawson, B. Baker, Q. Mo, D. Baumgardner, E.M. Weinstock, J.B. Smith, E.J. Moyer, T.F. Hanisco, D.S. Sayres, J.M. St Clair, M.J. Alexander, O.B. Toon, J.A. Smith. *Atmos. Chem. Phys.* 8, 2008.
- “Precise multi-pass Herriott cell design: Derivation of controlling design equations.” G.S. Engel, E.J. Moyer. *Optics Letters* 32, doi:10.1364/OL.32.000704, 2007.
- “Observations of deep convective influence on stratospheric water vapor and its isotopic composition.” T.F. Hanisco, E.J. Moyer, E.M. Weinstock, J.M. St.Clair, D.S. Sayres, J.B. Smith, R. Lockwood, J.G. Anderson, A.E. Dessler, F.N. Keutsch, J.R. Spackman, W.G. Read, T.P. Bui. *Geophys. Res. Lett.* 34, doi:10.1029/2006GL027899, 2007.
- “Ultra-sensitive near-IR integrated cavity output spectroscopy (ICOS) technique for detection of CO at 1.57 μm: new sensitivity limits for absorption measurements in passive optical cavities.” G.S. Engel, W. Drisdell, F.N. Keutsch, E.J. Moyer, J.G. Anderson. *Applied Optics* 45, doi:10.1364/AO.45.009221, 2006.

- “The Atmosphere Trace Molecule Spectroscopy Experiment (ATMOS) Version 3 data retrievals.” F.W. Irion, M.R. Gunson, G.C. Toon, A.Y. Chang, A. Eldering, E. Mahieu, G.L. Manney, H.A. Michelsen, E.J. Moyer, M.J. Newchurch, G.B. Osterman, C.P. Rinsland, R.J. Salawitch, B. Sen, Y.L. Yung, R. Zander. *Applied Optics* 41, doi:10.1364/AO.41.006968, 2002.
- “Mean ages of stratospheric air derived from in situ observations of CO₂, CH₄, and N₂O.” A.E. Andrews, K.A. Boering, B.C. Daube, S.C. Wofsy, M. Loewenstein, H. Jost, J.R. Podolske, C.R. Webster, R.L. Herman, D.C. Scott, G.J. Flesch, E.J. Moyer, J.W. Elkins, G.S. Dutton, D.F. Hurst, F.L. Moore, E.A. Ray, P.A. Romashkin, S.E. Strahan. *J. Geophys. Res.* 106, doi:10.1029/2001JD000465, 2001.
- “Comparison of in-situ N₂O and CH₄ measurements in the upper troposphere and lower stratosphere during STRAT and POLARIS.” D.F. Hurst, G.S. Dutton, P.A. Romanashkin, J.W. Elkins, R.L. Herman, E.J. Moyer, D.C. Scott, R.D. May, C.R. Webster, J. Grecu, M. Loewenstein, J.R. Podolske. *J. Geophys. Res.* 105, doi:10.1029/2000JD900218, 2000.
- “Subsidence, mixing, and denitrification of Arctic polar vortex air measured during POLARIS.” M. Rex, R.J. Salawitch, G.C. Toon, B. Sen, J.J. Margitan, G.B. Osterman, J.F. Blavier, R.S. Gao, S. Donnelly, E. Keim, J. Neuman, D.W. Fahey, C.R. Webster, D.C. Scott, R.L. Herman, R.D. May, E.J. Moyer, M.R. Gunson, F.W. Irion, A.Y. Chang, C.P. Rinsland, T.P. Bui. *J. Geophys. Res.* 104, doi:10.1029/1999JD900463, 1999.
- “An examination of chemistry and transport processes in the tropical lower stratosphere using observations of long-lived and short-lived compounds obtained during STRAT and POLARIS.” F. Flocke, R.L. Herman, R.J. Salawitch, E. Atlas, C.R. Webster, S.M. Schauffler, R.A. Lueb, R.D. May, E.J. Moyer, K.H. Rosenlof, D.C. Scott, D.R. Blake, and T.P. Bui. *J. Geophys. Res.* 104, doi:10.1029/1999JD900504, 1999.
- “Airborne Laser Infrared Absorption Spectrometer (ALIAS-II) for in situ atmospheric measurements of N₂O, CH₄, CO, HCl, and NO₂ from balloon or remotely piloted aircraft platforms.” D.C. Scott, R.L. Herman, C.R. Webster, R.D. May, G.J. Flesch, E.J. Moyer. *App. Optics* 38, doi:10.1364/AO.38.004609, 1999.
- “Closure of the total hydrogen budget of the northern extratropical lower stratosphere.” D.F. Hurst, G.S. Dutton, P. Romashkin, P.R. Wamsley, F.L. Moore, J.W. Elkins, E.J. Hintsa, E.M. Weinstock, R.L. Herman, E.J. Moyer, D.C. Scott, R.D. May, C.R. Webster. *J. Geophys. Res.* 104, doi:10.1029/1998JD100092, 1999.
- “Measurements of CO in the upper troposphere and lower stratosphere.” R.L. Herman, C.R. Webster, R.D. May, D.C. Scott, H. Hu, E.J. Moyer, P.O. Wennberg, T.F. Hanisco, E.J. Lanzendorf, R.J. Salawitch, Y.L. Yung, J.J. Margitan, T.P. Bui. *Chemosphere* 1, (*Special Issue on the Atmospheric Effects of Carbon Monoxide*), 1999.
- “Tropical entrainment timescales inferred from stratospheric N₂O and CH₄ observations.” R.L. Herman, D.C. Scott, C.R. Webster, R.D. May, E.J. Moyer, R.J. Salawitch, Y.L. Yung, G.C. Toon, B. Sen, J.J. Margitan, S.J. Oltmans, K.H. Rosenlof, H.A. Michelsen, J.W. Elkins. *Geophys. Res. Lett.* 25, doi:10.1029/98GL02109, 1998.
- “Seasonal variations of water vapor in the lower stratosphere inferred from ATMOS/ATLAS-3 measurements of H₂O and CH₄.” M.M. Abbas, H.A. Michelsen, M.R. Gunson, M.C. Abrams, M.J. Newchurch, R.J. Salawitch, A.Y. Chang, A. Goldman, F.W. Irion, G.L. Manney, E.J. Moyer, R. Nagaraju, C.P. Rinsland, G.P. Stiller, R. Zander. *Geophys. Res. Lett.* 23, doi:10.1029/96GL01321, 1996.
- “ATMOS stratospheric deuterated water and implications for troposphere-stratosphere transport.” E.J. Moyer, F.W. Irion, Y.L. Yung, M.R. Gunson. *Geophys. Res. Lett.* 23, doi:10.1029/96GL01489, 1996.

- “Stratospheric observations of HDO and CH₃D from ATMOS infrared solar spectra – enrichments of deuterium in methane and implications for HD.” F.W. Irion, E.J. Moyer, M.R. Gunson, C.P. Rinsland, Y.L. Yung, H.A. Michelsen, R.J. Salawitch, A.Y. Chang, M.J. Newchurch, M.M. Abbas, M.C. Abrams, R. Zander. *Geophys. Res. Lett.* 23, doi:10.1029/96GL01402, 1996.
- “The hydrogen budget of the stratosphere inferred from ATMOS measurements of H₂O and CH₄.” M.M. Abbas, M.R. Gunson, M.J. Newchurch, H.A. Michelsen, R.J. Salawitch, M. Allen, M.C. Abrams, A.Y. Chang, A. Goldman, F.W. Irion, E.J. Moyer, R. Nagaraju, C.P. Rinsland, G.P. Stiller, R. Zander. *Geophys. Res. Lett.* 23, doi:10.1029/96GL01320

WHITE PAPERS

- “Feasibility and Implications of the Michigan 2012 Proposal 3 for a 25% State Renewable Portfolio Standard.” E. Moyer, S. Johnson, L. Goldberger, and J. Zhu. *RDCEP Policy Analysis Paper*, Oct. 2012, also *CLOSUP Working Paper Series 32*, Oct. 2012 (Center for Local, State, and Urban Policy, Gerald R. Ford School of Public Policy, University of Michigan).
- “Implications of SB0678 and the Taylorville Energy Center.” A. Chitkara, M. D’orey, A. Frank, A. Johnson, S. Johnson, E. Moyer, D. Plotkin, T. Roberts, M. Templeton. *RDCEP Policy Analysis Paper*, May 2012.

EDITORIAL / OPINION

- “A New Kind of Scientist”. G. Schmidt and E. Moyer. *Nature Climate Change*, doi:10.1038/climate.2008.76, 2008.
- “Broadband Internet for Africa”. C. Juma and E. Moyer. *Science*, doi:10.1126/science.1161105, 2008.

MENTORSHIP

Postdocs

Shanshan Sun	2012-present	
Bill Leeds	2012-present	
Meghan Vincent	2011-present	
Laszlo Sarkozy	2010-present	
David McInerney	2010-2012	Postdoc, Univ. of Adelaide Dept. of Civil and Env. Engineering

Graduate students

Kara Lamb	PhD expect. 2014, Physics	
Ben Clouser	PhD expect. 2015, Physics	
Michael Glotter	PhD expect. 2015, Geophys. Sci.	
Eric Stutz	M.S. 2013, Geophys. Sci.	Bain Corp.
Stephanie Aho	M.S. 2011, Geophys. Sci.	Hitachi Global Storage Technologies

Undergraduate students (honors theses)

Joe Zhu	B.S. expect. 2014, Geophys. Sci.	
Rachel Atlas	B.S. expect. 2014, Geophys. Sci.	
Lexie Goldberger	B.S. expect. 2014, Geophys. Sci.	
Lisa Pawlowicz	B.S. 2012, Physics	MIT, Dept. of Electrical Engineering
Sarah Bang	B.S. 2010, Geophys. Sci.	Univ. of Utah, Dept. of Meteorology

COMMUNITY / SERVICE: ATMOSPHERIC SCIENCE

Leadership

- PI, “International collaboration on isotopic studies of ice clouds”, 2013-2014
Funded by the France-Chicago foundation for collaboration with the Laboratoire de Météorologie Dynamique
- Selection committee, NOAA Climate and Global Change Postdoctoral Fellowship, 2012-15 term
- Session convenor, V.M. Goldschmidt Conference (Florence, Italy), Aug. 2013. “*Water isotopes as tracers of convection, microphysics, and atmospheric dynamics*”
- Organizing committee, Cargese International Summer School on Water Vapor in the Climate System (Cargese, France), Sept. 2009
- Program committee, Chapman Conference on Water Vapor (Kailua-Kona, HI), Oct. 2008
- Organizing committee, Cargese International Summer School on the Upper Troposphere and Lower Stratosphere (Cargese, France), Oct. 2005

Invitational workshops

- SPARC Water Vapor Workshop (Toronto, CA), March 2009
- Global Ecology, Mathematical Biosciences Institute (Columbus, OH), June 2006
- Workshop on Isotopes in the Earth System (Boulder, CO), Jan. 2004

External thesis committees

- Maximilien Bolot, PhD, Ecole Normale Supérieure, Oct. 2013
thesis: “*Approche théorique de la distribution des isotopologues stables de l’eau dans l’atmosphère tropicale, de l’échelle convective aux grandes échelles*”
- Vasileios Gkinis, PhD, University of Copenhagen, Nov. 2011
thesis: “*High resolution water isotope data from ice cores*”

COMMUNITY / SERVICE: CLIMATE AND ENERGY POLICY

Leadership

- Co-organizer, RDCEP Climate Uncertainty Workshop (Chicago, IL), Sept. 2012
- Session convenor, American Geophysical Union Fall Meeting (SF, CA), Dec. 2010.
“*Climate Modeling in Support of Policy Decisionmaking: Needs and Limitations*”

Invited presentations / education

- Midwest Faculty Seminar: “Climate Change Across the Disciplines”, leadoff speaker (Univ. of Chicago), April 2013
- Nobel Symposium Public Panel (Stockholm, Sweden), Sept. 2012
“*How Can We Solve the Problem of Global Warming?*”
- UIC Summer Institute on Sustainable Energy (SISE), leadoff speaker, Aug. 2012
- Energy & Enterprise Initiative Discussion Forum, panelist, April 2012
“*Fixing Market Distortions: A Free Enterprise Solution for Energy & Climate?*” (U. Chicago Booth School of Business)
- NSF Clean Energy Education Workshop, (Champaign-Urbana, IL), Oct. 2011
(*breakout group leader for energy literacy*)

UIC Summer Institute on Sustainable Energy (SISE), leadoff speaker, Aug. 2011
Harper Lecture, “*Robust Decision-making on Climate and Energy Policy*”, April 2011
(with Ian Foster, Director, U. Chicago Computation Institute)
Midwest Faculty Seminar: “Energy”, speaker (Univ. of Chicago), April 2011
Cafe Scientifique (Chicago, IL), “*A Reality Check on Alternative Energy*”, Nov. 2011
organized by U. Chicago Kavli Institute for Cosmological Physics
Northwestern University Climate Change Symposium (Evanston, IL), Oct. 2010
EmTech@MIT, “Fireside chat about CIM-EARTH” (Cambridge, MA), Sept. 2010
Northwestern University Climate Change Symposium (Evanston, IL), Oct. 2009
African Institute for Mathematical Sciences (Muizenberg, R.S.A), Jan.-Feb. 2006,
Dec. 2006. Lecturer, “Climate Modeling” and “Environmental Modeling”. *Designed
and taught courses at a 1-year postgraduate program for math and science
graduates of African universities aimed at preparing students for graduate school.*

Invitational workshops:

SEES Workshop on Natural and Engineered Carbon Sequestration (Minneapolis, MN),
Oct. 2011
American Academy of Arts and Sciences Workshop on Social Science and the Alternative
Energy Future (Washington, DC), May 2011
Interagency Workshops on Improving the Assessment and Valuation of Climate Change
Impacts for Policy and Regulatory Analysis (*sponsored by EPA/DOE*)
II: Physical Impacts (Washington, DC), Jan 2011
I: Economic Modeling (Washington, DC), Nov 2010
DOE Workshop on Science Challenges and Future Directions for Integrated Assessment
Research (Arlington, VA), Nov. 2008
(*sponsored by the DOE Office of Science, Integrated Assessment Research Program*)
Modeling Uncertainty in Integrated Assessment Models, (Univ. of Chicago), July 2008
(*sponsored by the DOE Office of Science, ANL, U. Chicago, NW, and UIUC*)

INTERNAL UNIVERSITY OF CHICAGO SERVICE

Faculty Council member, Energy Policy Institute at Chicago, 2011-present
Computations in Science seminar, Aug. 2012
“*Nonlinearity in the long tail of climate warming*”
Organizer, University of Chicago lecture series “*Energy in the 21st Century*”, 2008-2009

Guest lecturer for:

Harris School of Public Policy, “*Science, Technology, and Policy*”
(Sallee/Kolb/Lamb), 2011, 2012, 2013
Booth School of Business, “*Energy Economics*” (Topel), 2011
Law School, “*The Law and Policy of Climate Change*” (Weisbach), 2010
College, Great Problems, “*Energy Policy*”, (Berry and Tolley), 2008 and 2009
Prospectives students’ “*Snow Day Class*”, 2013
Parents’ Day “*Model Class*”, 2009, 2010, 2012