

Solomon M. Hsiang
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Contact Information:

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Current Appointment:

7/2015- Chancellor's Associate Professor of Public Policy (w. tenure)
Principle Investigator, Global Policy Laboratory
University of California, Berkeley

Affiliations:

8/2016- Co-Director, Climate and Environment Initiative, UC Berkeley Opportunity Lab
5/2016- Co-Principle Investigator, Climate Impact Lab
5/2016- Associate Director, Center for Environmental Public Policy
5/2015- Faculty Affiliate, Department of Agriculture and Resource Economics
5/2015- Faculty Affiliate, Center for Effective Global Action
6/2015- Senior Fellow, Berkeley Institute for Data Science
University of California, Berkeley

9/2016- Research Associate
National Bureau of Economic Research

Previous Appointments / Affiliations:

8/2013-6/2015 Assistant Professor, Goldman School of Public Policy
1/2014-6/2014 Visiting Scholar, Energy Institute at Haas
University of California, Berkeley

8/2011-7/2013 Post-Doctoral Research Fellow in Science, Technology & Environmental Policy
Woodrow Wilson School of Public & International Affairs
Princeton University

5/2013-9/2016 Faculty Research Fellow
1-7/2011 Post-Doctoral Research Fellow in Applied Econometrics
National Bureau of Economic Research

Education:

Columbia University

Ph.D. Sustainable Development (2011), *with distinction*

Massachusetts Institute of Technology

B.S. Earth, Atmospheric and Planetary Science (2006), thesis awarded *Goetze Prize*
B.S. Urban Studies and Planning (2006), thesis awarded *Outstanding Thesis Award*

Books:

Economic Risks of Climate Change: An American Prospectus

Houser, T., S.M. Hsiang, R. Kopp, K. Larson, M. Delgado, A.S. Jina, M. Mastreandrea, S. Mohan, R. Muir-Woods, D.J. Rasmussen, J. Rising, P. Wilson, *Columbia University Press* (2015)

Papers:

Social and economic impacts of climate

Carleton*, T.A. S.M. Hsiang*, *Science* (2016) DOI: 10.1126/science.aad9837 (* equal contribution)

Does legalization reduce black market activity? Evidence from a global ivory experiment and elephant poaching data

Hsiang, S.M., N. Sekar, *NBER Working Paper No. 22314* (2016)

Climate Econometrics

Hsiang, S.M., *Annual Review of Resource Economics* (2016) DOI: 10.1146/annurev-resource-100815-095343

Potentially Extreme Population Displacement and Concentration in the Tropics Under Non-Extreme Warming

Hsiang, S.M., A.H. Sobel, *Scientific Reports* (2016) DOI:10.1038/srep25697

Conflict in a Changing Climate

Carleton, T.A., S.M. Hsiang, M. Burke, *European Physical Journal Special Topics* (2016)
DOI:10.1140/epjst/e2015-50100-5

Opportunities for advances in climate change economics

Burke, M., M. Craxton, C. D. Kolstad, C. Onda, H. Allcott, E. Baker, L. Barrage, R. Carson, K. Gillingham, J. Graf-Zivin, M. Greenstone, S. Hallegatte, W.M. Hanemann, G. Heal, S. Hsiang, B. Jones, D. L. Kelly, R. Kopp, M. Kotchen, R. Mendelsohn, K. Meng, G. Metcalf, J. Moreno-Cruz, R. Pindyck, S. Rose, I. Rudik, J. Stock, R. S. J. Tol, *Science* (2016) 352(6283):292-293

Global non-linear effect of temperature on economic production

Burke*, M., S.M. Hsiang*, E. Miguel, *Nature* (2015) DOI: 10.1038/nature15725 (* equal contribution)

Temperature and Human Capital in the Short- and Long-Run

Graff Zivin, J., S.M. Hsiang, M. Neidell *NBER Working Paper No. 21157* (2015) – revisions requested, *Journal of the Association of Environmental and Resource Economists*

Tropical Economics

Hsiang, S.M., K.C. Meng, *American Economic Review* (2015) Papers & Proceedings, 105(5): 257–261

Geography, Depreciation, and Growth

Hsiang, S.M., A.S. Jina, *American Economic Review* (2015) Papers & Proceedings, 105(5): 252-256

Economic and Non-Economic Factors in Violence: Evidence from Organized Crime, Suicides and Climate in Mexico

Baysan, C. M. Burke, F. Gonzalez, S. Hsiang, E. Miguel (2015)

Climate and conflict

Burke, M., S.M. Hsiang, E. Miguel, *Annual Review of Economics* (2015) DOI:10.1146/annurev-economics-080614-115430

Analysis of Statistical Power Reconciles Climate-Conflict Results in Africa

Hsiang, S.M., M. Burke, E. Miguel, M. Cane, K. Meng, *CEGA working paper* (2015)

The causal effect of environmental catastrophe on long-run economic growth: Evidence from 6,700 cyclones

Hsiang, S.M., A.S. Jina, *NBER working paper No. 20352* (2014) – revisions requested, *J. of Political Economy*

Does the Environment Still Matter? Daily Temperature and Income in the United States

Deryugina, T., S.M. Hsiang, *NBER Working Paper No. 20750* (2014)

Nonlinear permanent migration response to climatic variations but minimal response to disasters

Bohra-Mishra, P., M. Oppenheimer, S.M. Hsiang, *Proceedings of the National Academy of Sciences* (2014)

Temperature and Violence

Cane, M.A., E. Miguel, M. Burke, S.M. Hsiang, D.B. Lobell, K.C. Meng, S. Satyanath, *Nature Climate Change* (2014) **4**, 234–235

Reconciling disagreement over climate–conflict results in Africa

Hsiang, S.M., K.C. Meng, *Proceedings of the National Academy of Sciences* (2014)

Reconciling climate-conflict meta-analyses: Reply to Buhaug et al.

Hsiang, S.M., M. Burke, E. Miguel, *Climatic Change* (2014) DOI: 10.1007/s10584-014-1276-z

Reconciling temperature-conflict results in Kenya

Hsiang, S.M., M. Burke, E. Miguel, *CEGA working paper* (2013)

Quantifying the Influence of Climate on Human Conflict

Hsiang*, S.M., M. Burke*, E. Miguel, *Science*, **341** (2013) 1235367 (* equal contribution)

Climate, Conflict and Social Stability: What does the evidence say?

Hsiang, S.M., M. Burke, *Climatic Change*, (2013) DOI 10.1007/s10584-013-0868-3

Using Weather Data and Climate Model Output in Economic Analyses of Climate Change

Auffhammer, M., S.M.Hsiang, W. Schlenker, A.H. Sobel. *Review of Environmental Economics and Policy*, 7 (2013) 181–198

Destruction, Disinvestment, and Death: Economic and Human Losses Following Environmental Disaster
Anttila-Hughes, J., S.M. Hsiang (2012)

Visually-Weighted Regression
Hsiang, S.M (2012)

Adaptation to Cyclone Risk: Evidence from the Global Cross-Section
Hsiang, S.M., D. Narita. *Climate Change Economics: Special Issue on Adaptation*, 3 (2012)

Civil conflicts are associated with the global climate
Hsiang, S.M., K.C. Meng, M.A. Cane. *Nature*, 476 (2011) 438-441

Temperatures and cyclones strongly associated with economic production in the Caribbean and Central America
Hsiang, S.M. *Proceedings of the National Academy of Sciences*, 107 (2010) 15367-15372

Reviewed Reports and Book Chapters:

Tropical Cyclones: From the Influence of Climate to their Socio-Economic Impacts
Camargo, S., S.M. Hsiang, in "Extreme Events: Observations, Modeling, and Economics", Eds. Chavez, M., M. Ghil, J.U. Fucuguchi, Wiley (2015) DOI 10.1002/9781119157052.ch18.

Chapter 18: Detection and Attribution of Observed Impacts
Cramer, W, GW Yohe, et al. (2014). In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability*. Ed. by V Barros, C Field, et al. Cambridge, UK: Cambridge University Press.

Chapter 19: Emergent Risks and Key Vulnerabilities
Oppenheimer, M, M Campos, R Warren, et al. (2014). In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability*. Ed. by V Barros, C Field, et al. Cambridge, UK: Cambridge University Press.

Reviewed conference papers:

Empirically calibrating damage functions and considering stochasticity when integrated assessment models are used as decision tools
Kopp, R.E., S.M. Hsiang, M. Oppenheimer (2013) International Conference on Climate Change Effects, Potsdam.

Awards:

2016 National Academy of Sciences Kavli Fellow
2014 Forbes 30 Under 30: Law and Policy
2014 Diablo Magazine 40 Under 40
2013 American Geophysical Union Science for Solutions Award
2011 Dissertation Awarded Distinction
2009 Columbia University President and Provost Award (with organizing committee of the 18th PhD Workshop in International Climate Policy, lead organizer)

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- 2008-11 Environmental Protection Agency: Science to Achieve Results (STAR) Fellow
- 2007-10 National Science Foundation: Integrative Graduate Educ. & Research Traineeship (IGERT) Fellow
- 2006 Goetze Prize for Thesis in Earth, Atmospheric and Planetary Sciences, MIT
- 2006 Outstanding Thesis Award in Urban Studies and Planning, MIT

Grants:

- 2016 “Labor Productivity in a Warmer World” Inst. for Research on Labor and Employment (\$12,436)
- 2016-19 “Quantitative Sustainable Development” (\$1.5M)
- 2016 “Optimal Use of Spatial Information in Crowd-Sourced Meta-Analysis of Understudied Populations” CEQA-BITSS-SSMART (\$30,000 w. James Rising)
- 2015-17 “Food Security and Social Stability in Africa” International Growth Center (£99,091. w. M. Greenstone, A. Jina, A. Rode)
- 2015-16 “Developing Tools for the Security, Conflict Prevention and Humanitarian Assistance Communities” Skoll Global Threats Fund (\$200,000. w. T. Houser)
- 2015 “Coordinating Leisure” Institute for Research on Labor and Employment (\$15,141)
- 2015-16 Weiss Family Program Fund for Research in Development Economics (\$25,507. w. J. Magruder)
- 2015-20 “Environment and Society: Data Science for the 21st century” NSF Research Traineeship program (\$2,790,000. Faculty Participant and Steering Committee)
- 2015 “Deploying Interdisciplinary Data Science to Understand the Global Impact of Climate Change” Social Science Matrix Prospecting Seminar
- 2015 “Climate and global poverty” (\$50,000. Co-investigator with M. Burke)
- 2013-14 “Econometric assessment of climate change impacts in the USA” (\$143,908)
- 2013-14 “Quantifying agricultural adaptation to climate change” (\$25,500. w. E. Miguel & M. Burke)
- 2011 Center for International Business Education & Research Grant (with Jina, A. & von der Goltz, J.)
- 2010 Center for International Business Education & Research Grant (with Anttila-Hughes J. & Narita, D.)
- 2008 Committee for Global Thought Travel Grant

Opinion & Popular Writing:

- “Would a legal ivory trade save elephants or speed up the massacre?” with Nitin Sekar, *The Guardian*, 10/1/2016
- “Climate change is indeed a cause of social conflict” with Marshall Burke, *Los Angeles Times*, 12/17/2015
- “Costs and Benefits, Yes, but Whose Numbers?” with Marshall Burke, *The Wall Street Journal*, 11/22/2015
- “El Nino: a global weather event that may save California – and destroy the tropics” with Kyle Meng, *The Guardian*, 9/21/2015
- “Facing the storm after the storm in Vanuatu” with Amir Jina, *Reuters*, 3/19/2015
- “Weather and Violence” with Marshall Burke and Edward Miguel, *New York Times*, 8/30/2013
- “Are we well adapted to our climate?” *EARTH*, 8/2012
- “Climate Change and Civil Conflict: New Clues from El Nino” *EARTH*, 11/2011
- “Humans at High Temperatures: Reconsidering the Economics Implications of Climate Change” *EARTH*, 2/2011

Teaching:

Foundations of Sustainable Development

Semesters of instruction: F14, F15, F16

Spatial Data and Analysis

Semesters of instruction: F13, F14, F15, F16

Interdisciplinary Research Methods: Environment, Society, & Global Change

March, 2017

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Co-taught with L. Larsen, D. Ackerly, M. Auffhammer

Semesters of instruction: F16

Climate Economics Workshop

Co-organized with D. Anthoff, M. Auffhammer

Semesters: F16, S16, F16, S17

Workshop in Climate Econometrics

Instruction: Summer 2015

Doctoral and Post-Doctoral Advising (placement):

Kendon Bell	(Landcare Research)
Felipe González	(Pontificia Universidad Católica de Chile, Economics faculty)
James Rising	(London School of Economics, Grantham faculty)
Patrick Baylis	(Stanford, FSE postdoc / U. British Columbia, Economics faculty)
Francis Moore	(UC Davis, Environmental Science and Policy faculty)
Amir Jina	(U. Chicago, Economics postdoc / U. Chicago, Public Policy faculty)

Academic Service:

Work Group for Berkeley Roadmap on Environment, Climate, and Energy Efficiency Research (2017)

GSPP Admissions Committee (2017)

UCSF Climate Change and Global Health Steering Committee (2016)

Data Science Planning Initiative Faculty Advisory Panel (2016)

Data Science for the Twenty-First Century Faculty Steering Committee (2015-)

Berkeley Research Computing Advisory Group (2016-)

NSF Dynamics of Coupled Natural and Human Systems (CNH) advisory panel (2015)

American Geophysical Union Science for Solutions Award Committee (2015-16)

Blog Contributor: www.fight-entropy.com, www.G-FEED.com

Conference Sessions Organized:

Sustainable Development Research Symposium (2016)

American Economic Association (2015, 2016)

American Geophysical Union (2011, 2012, 2014)

Association of Environmental & Resource Economists (2012)

Ph.D. Workshop on International Climate Policy (2009)

Invited Presentations:

2017 –

Stanford (*Scheduled*)

UC Santa Barbara (*Scheduled*)

Cornell (*Scheduled*)

National Bureau of Economic Research (EEE Spring Meeting)

American Economics Association

Carnegie Mellon University (Applied Micro, *Scheduled*)

2016 –

March, 2017

National Academy of Sciences (Kavli Frontiers of Science)
MIT (EmTech)
MIT (Earth, Atmospheric and Planetary Science Departmental Seminar)
MIT (Urban Studies and Planning Environmental Policy Lunch)
Harvard University (Environmental Economics Seminar)
Yale University (Environmental Economics/Forestry Seminar)
Columbia University (SusDeveR)
International Agricultural Trade Research Consortium
National Bureau of Economic Research (EFJK Growth Group Winter Meeting)
National Bureau of Economic Research (EEE Spring Meeting)
Effective Altruism Global
Blackrock (Scientific Active Equity)
Sandia National Labs
Duke University/NC State (Triangle Resource & Environmental Economics Seminar)
Arizona State University (Tipping Points Forum)
MIT (TIM Talks)
The White House
UC Berkeley (Public Policy Seminar)
UC Berkeley (Energy Camp)
UC Berkeley (Demography)
UC Berkeley (Institute for Research on Labor and Employment)
American Economic Association

2015 –

UC Davis (Environmental Economics Seminar)
National Academy of Sciences
US State Department
British Consulate-General, San Francisco
American Geophysical Union
UC Santa Barbara (Occasional Workshop)
Haas School of Business, UC Berkeley (Real Estate)
PERC (Market Adaptation to Climate Change)
International Food Policy Research Institute (Applied Microeconomics and Development)
California Energy Commission (IEPR workshop)
National Bureau of Economic Research (Environmental Econ & Energy Summer Institute)
National Bureau of Economic Research (Income Distribution & Macro Summer Institute)
Stanford University (Stanford Energy and Environmental Economics Policy Analysis Center)
Stanford University (Environmental Economics Seminar)
Oxford University (OxCarre Centre for the Analysis of Resource Rich Economies)
London School of Economics (Climate Change and Environment)
University of Chicago (Public Policy)
University of Maryland (Economics Seminar)
Princeton University (Development / Center for Health and Well-Being)
Princeton University (Science, Technology & Environmental Policy)
Rutgers University (Earth and Planetary Science)
Oklahoma University (Geography and Environmental Sustainability)
Strata + Hadoop World (Keynote)
UC Berkeley (Agricultural and Resource Economics/Energy Institute Seminar)
American Economic Association

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2014 –

Discrete Mathematics & Theoretical Computer Science (Workshop on Global Change)
National Bureau of Economic Research Winter Meeting (Environmental Econ & Energy)
MIT (CEEPR)
Stanford University (Climate Risk Forum)
Stanford University (The Hamilton Project)
Lawrence Berkeley National Laboratory (Climate Sciences Seminar)
Bloomberg Philanthropies
Resources for the Future
California Governor's Office
The White House
Columbia University (Sustainable Development Seminar)
Columbia University (Sustainable Development 10 Year Anniversary Speaker)
Boston University (Program in Mathematics for Young Scientists, Alumni Reunion Keynote)
Risk Management Solutions (Annual Meeting, Keynote Speaker)
University of Chicago (Energy Policy Institute at Chicago)
American Geophysical Union (Fall Meeting)
Potsdam Institute for Climate Impact Research
USGS (Western Region Colloquium)
UC Berkeley (Geography)
UC Berkeley (CEGA)
UC Berkeley (Energy Institute at Haas Seminar)
UC Berkeley (Environmental Resource Group Seminar)
UC Berkeley (Institute for the Study of Societal Issues)
UC Berkeley (Summer Seminar in Applied Microeconomics)
UC Berkeley (Agricultural and Resource Economics Seminar)
UC Berkeley (Berkeley Institute for Transparency in Social Sciences)
UC Berkeley (UCE3)

2013 –

American Geophysical Union (Fall Meeting Awards Session)
Cornell University (Northeast Workshop on Energy Policy and Environmental Economics)
Columbia University (Earth Summit)
Columbia University (Abrupt Climate Change Studies Symposium)
Department of Energy (Energy Frontier Research Center for gas separations relevant to clean air tech.)
Geophysical Fluid Dynamics Laboratory (Lunch Seminar)
Harvard University (Humanitarian Action Summit)
IBM Research (Mathematics of a Smarter Planet Seminar)
IZA (Labor Market Effects of Environmental Policies Workshop)
Lamont-Doherty Earth Observatory (World-Wide Human Geography Data Working Group)
Princeton University (Science, Technology and Environmental Policy Seminar)
Carnegie Institute/Stanford University (Department of Global Ecology Seminar)
Syracuse University (Public Affairs Seminar)
UC Berkeley (Philomathia Forum: Food, Population, Security)
UC Berkeley (Center for Environmental Public Policy)
UC Berkeley (Development Economics Seminar)
UC Berkeley (Berkeley Institute for Data Science)
UC Berkeley (Berkeley Atmospheric Sciences Center)

UC San Diego (Economic Development Seminar)
UC San Diego (Symposia on Water Issues in Climate Change)
University of Lausanne (DEEP Advanced Seminar in Economics)
University of Zurich (Macro-Finance-Labor Seminar)
Williams College (Urbanization and Economic Development Conference)
World Bank (Green Growth symposium)

2012 –

American Economics Association
American Association of Geographers
American Geophysical Union (Fall Meeting)
British Council in Paris (Climate and Security)
Cercle National des Armées (Climate and Security)
Columbia University (Applied Microeconomics Seminar)
Columbia University (SIPA Alumni Weekend)
Columbia University (IPWSD “Frontiers of Sustainable Development”)
Environmental Defense Fund (Applied Environmental Economics Seminar)
Environmental Protection Agency (Climate Economics Seminar)
Harvard (Environmental Economics Seminar)
MIT (Terrascope Alumni Dinner Keynote)
National Bureau of Economic Research (Health Care / Environmental Econ & Energy joint meeting)
Princeton (Science, Technology and Environmental Policy)
UC Berkeley (Public Policy Seminar)
UC Berkeley (Energy Institute Seminar)
UC Santa Barbara (Occasional California Workshop on Environmental and Resource Economics)
University of San Francisco (Economics Seminar)

2011 –

American Geophysical Union (Fall Meeting)
Columbia University (Applied Physics & Applied Math Seminar)
Columbia University (Sustainable Development Seminar)
Columbia University (Applied Microeconomics Seminar)
Environmental Defense Fund (Applied Environmental Economics Seminar)
Mailman School of Public Health (Climate and Health Seminar)
MIT (Sloan Applied Economics Seminar)
Property & Environment Research Center
Stanford University (Environmental Earth System Science Seminar)
Woodrow Wilson Center
UC Santa Barbara (Environmental Management Seminar)

Referee Service:

American Economic Journal: Applied
American Economic Journal: Macro
American Economic Review
American Political Science Review
American Journal of Agricultural Economics
American Journal of Political Science
California Energy Commission
Climatic Change

Climate Change Economics
Columbia University Press
Ecological Economics
Econometrica
Energy Economics
Environmental Research Letters
European Physics Journal Special Topics
Global Environmental Change

Global Environmental Politics
Journal of Development Economics
Journal of Economic Literature
Journal of Economic Studies
Journal of Environmental Economics and Management
Journal of the Association of Environmental and Resource Economists
Journal of the European Economics Association
Journal of Peace Research
Journal of Political Economy
National Science Foundation

Nature
Nature Climate Change
PLOS One
Proceedings of the National Academy of Science
Quarterly Journal of Economics
Review of Economics and Statistics
Review of Economic Studies
Science
Science Advances
The Economic Journal
Weather, Climate and Society