

## Juan B. Moreno-Cruz

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ADDRESS School of Economics  
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USA 30332

CITIZENSHIP Colombian.  
Permanent Resident US.

EDUCATION Ph.D. Economics, University of Calgary, 2010.  
*Thesis*: “Essays on the Economics of Geoengineering”  
*Advisors*: Professors David Keith and Sjak Smulders  
M.Sc. Electrical Engineering, Universidad de Los Andes, 2004.  
B.Sc. Electrical Engineering, Universidad de Los Andes, 2003.

RESEARCH INTERESTS Energy, Environmental and Natural Resources Economics.  
Technological Change, Economic Growth and Institutions.  
Climate Change Economics and Climate Engineering.

CURRENT POSITION Assistant Professor (since August 2011):  
School of Economics — Georgia Institute of Technology.

PEER-REVIEWED PAPERS “Strategic incentives for climate geoengineering coalitions to exclude broad participation” with Katharine Ricke and Ken Caldeira. Environmental Research Letters 2013 8 014021 DOI:10.1088/1748-9326/8/1/014021  
“The Intergenerational Transfer of Solar Radiation Management Capabilities and Atmospheric Carbon Stocks.” with Timo Goeschl and Daniel Heyen. Forthcoming Environmental and Energy Economics DOI: 10.1007/s10640-013-9647-x  
“Climate Policy under Uncertainty: A Case for Geoengineering.” with David Keith. Climatic Change May 2012 Online First DOI 10.1007/s10584-012-0487-4  
“A simple model to account for regional inequalities in the effectiveness of solar radiation management.” with Katharine Ricke and David Keith. Climatic Change February 2012, Volume 110, Issue 3-4, pp 649-668

NON-PEER REVIEWED PAPERS “Is the Photovoltaic Learning Curve Flattening?” (2011) with David W. Keith. Near Zero.  
“Peak Coal and the Fallacies of the Logistic Fit” with David Keith. Nature 469, 472 (27 January 2011)  
“A Sustainable Policy Making - Energy System for Colombia,” IIASA IR 009, 2004.

WORKING  
PAPERS

“A Two Sided Carbon Story: Carbon Capture and Storage and Enhanced Oil Recovery” (2014) with Byung-Cheol Kim

“Does Atlanta Value MARTA? Selecting an autoregressive model to recover willingness to pay.” (2014) with Gregory Macfarlane and Laurie Garrow.

“A Spatial Approach to Energy Economics,” (2014) with M. Scott Taylor. NBER Working Paper WP 18908

“Back to the Future of Green-Powered Economies,” (2012) with M. Scott Taylor. NBER Working Paper WP 18236

“Mitigation and the Geoengineering Threat,” (2014)

“Revisiting The Economics of Climate Change: The Role of Geoengineering,” (2013) with Sjak Smulders.

BOOK REVIEW

“Energy Market Restructuring and the Environment,” Governance and Public Goods in Globally Integrated Markets. Washington, DC: Helfred Publications, 2003.

CONFERENCES  
AND INVITED  
SEMINARS

**2014 and forthcoming**

“The Environmental Impacts of Electricity Congestion” Southern Economic Meetings, November 2014, Atlanta, GA.

“Trade Integration and the Fragility of Trade Relationships” 3rd Advances in International Trade Workshop, November 2014, Atlanta, GA.

“Hydraulic Fracturing Practices Explored Through County Demographics in Texas” APPAM Fall Conference, November 2014, Albuquerque, NM.

“New World Crops and African Slavery” Canadian Economic Meetings, May 2014, Vancouver, BC, Canada.

**2013**

“Solar Geoengineering: International and Intergenerational Equity — An Economic Perspective” Climate Policy Seminar, Earth Institute, Columbia University, New York. November 13th, 2013

“A Spatial Approach to Energy Economics” SITE Summer Workshop, Stanford University, Stanford, August 12-13, 2013

“Back to the Future of Green-powered Technologies” NBER Summer Institute, Boston, July 22-23, 2013

“A Spatial Approach to Energy Economics” AERE Summer Conference, Banff, June 6-8, 2013

**2012**

“Solar Geoengineering: International and Intergenerational Equity — An Economic Perspective” 24th U.S. Kavli Frontiers of Science, Irvine. November 2nd, 2012

“Back to the Future of Green Powered Economies,” Georgia State University, Atlanta. October 2nd, 2012

“Back to the Future of Green Powered Economies,” University of Georgia, Athens. September 18th, 2012

“Back to the Future of Green Powered Economies,” Georgia Institute of Technology, Atlanta. September 18th, 2012

“Long-term environmental problems and strategic intergenerational transfers,” Department of Geography and Earth Sciences at University of North Carolina, Charlotte. Feb 18th , 2012.

“A game-theoretic analysis of coalitions to engineer climate” Climate and Energy Decision Making Center, Pittsburgh, Pennsylvania March 18th-19th, 2012

### **2011**

“Long-term environmental problems and strategic intergenerational transfers,” CEA Meetings, Ottawa, Ontario. June 2nd - June 5th, 2011.

“An Energetic Approach to Energy Transitions,” Macro Economics and the Environment: Climate Change, Policy Design and Sustainability, Tempe, Arizona. Thursday May 5, 2011

### **2010**

“Climate policy under uncertainty: a case for geoengineering” World Congress of Environmental and Resource Economics, Montreal, Quebec. June 28th -July 2nd, 2010.

“Geoengineering and Catastrophic Climate Change” CEA Meetings, Quebec City, Quebec. March 28th - 30th, 2010.

“Geoengineering: when and how much?” Climate Decision Making Center Annual Meeting, Pittsburgh, Pennsylvania. March 18th - 19th, 2010.

### **2009**

“Flexible Climate Policies: Abatement and Geoengineering.” Plan Z Workshop. Fergus, Ontario. September 17th - 18th, 2009.

“The Long and Short of Climate Change: Abatement vs. Geoengineering.” National Bureau of Economic Research, NBER Summer Institute Environmental Workshop (Short-presentation). Boston, Massachusetts. July 20th - 21st, 2009.

“The Simple Economics of Geoengineering.” Technology Management Policy Graduate Consortium. Vancouver, British Columbia. June 22nd - 24th, 2009.

“Optimal climate policy with uncertain geoengineering.” Climate Decision Making Center, Carnegie Mellon University, Pittsburgh, PA. May 18th - 21st, 2009.

### **2008**

“An impartial look at geoengineering.” The Long Haul Workshop, Victoria, British Columbia. August 11th - 13th, 2008.

“Cost-effective Groundwater Protection as a Dynamic Game.” CAES-NAREA meetings. Quebec City, Quebec. June 30th - July 1st, 2008.

“Geoengineering under Uncertainty.” Technology Management Policy Graduate Consortium, Utrecht, June 22nd - 25th, 2008.

“Geoengineering and the value of information.” Invited presentation, Liu Institute, University of British Columbia, Vancouver, British Columbia. June 3rd, 2008.

### **2007**

“Geoengineering and Economic Growth: Making Climate Change Irrelevant or Buying Time.” International Energy Workshop, Stanford University. Stanford, California. June 27th, 2007.

### **2003**

“Un sistema sostenible para la creacion de politicas energeticas.” VI Congreso Internacional de Analisis y Mercados Energeticos, Medellin. 2003.

“A Sustainable Energy System for Colombia.” Mid Summer Workshop Young Scientist Summer Program. Laxenburg. 2003.

“A Sustainable Energy System for Colombia.” Third World Academy of Sciences. Trieste. 2003.

PROFESSIONAL  
SERVICE AND  
OTHER  
ACTIVITIES

**Thesis Committees:** Sarah Porter (Masters) Jingwen Qu (Masters) Mingtao Xu (Masters) Greg Macfarlane (Masters)

**Service Committees:**  
Ph.D. Admission Committee. School of economics. Georgia Institute of Technology.  
Building a New Undergraduate Program Committee. School of Economics. Georgia Institute of Technology.

**Conferences and workshops organized:**

Second Annual Summer School on Climate Engineering, Banff, AB, Canada. August 1st - 7th, 2011. Jointly organized by the University of Calgary, Heidelberg University and Carnegie Mellon University.

Fourth Annual Summer School on Climate Engineering, Cambridge, MA, USA. August 4th - 10th, 2013. Jointly organized by the University of Harvard and Heidelberg University.

**Conferences and workshops attended:**

Geoengineering Our Climate: Science, Ethics and Governance. Ottawa January 18th - 20th, 2012

Solar Geoengineering Scenarios Workshop, Yale Climate and Energy Institute. September 9th - 11th, 2011

Summer School on Global Governance of Climate Engineering, Heidelberg. July 12th - 26th, 2010.

Asilomar International Conference on Climate Intervention Technologies. Pacific Grove California, March 22nd - 26th, 2010.

Workshop on Geoengineering, NAS. Washington DC, June 15th - 16th, 2009.

Canadian Institute for Advanced Research. Calgary, Alberta. June 27th, 2009.

**Referee for:**

*Anthropocene Review, Canadian Journal of Economics, Climate Policy, Climatic Change Journal, Contemporary Economic Policy, Ecological Economics, Energy Journal, Energy and Environmental Economics, Environment and Development Economics, Environmental Science and Technology, Journal of Environmental Economics and Management, Nature Climate Change, Socio-economic Planning Sciences.*

ACADEMIC  
EXPERIENCE

**Georgia Institute of Technology, School of Economics**

Assistant Professor (Term, Evaluations out of 5)

Professor: Econ 4813, Sports Economics (Spring 2013, NA)

Econ 6106, Microeconomic Analysis (Fall 2011, 4.12) (Fall 2012, 4.11)

Econ 6380, Environmental Economics (Spring 2012, 5) (Spring 2012, 4.875)

Econ 7032, Macro of Innovation (Fall 2011, 4.75) (Fall 2012, 4.4) (Fall 2013)

Econ 7102, Environmental Economics (Fall 2012, 5)

**Universidad de Los Andes**

Invited Lecturer: Advanced Microeconomic Theory (Undergrad) (Summer 2012)

**University of Calgary, Energy and Environmental Systems Group**

Post-doctoral fellow (January 2010 - August 2011)

**University of Calgary, Department of Economics**

Instructor: Environmental Economics (Spring 2010)

Research Assistant: David W. Keith (2005-2009), M. Scott Taylor (2009),  
Jean François Wen (2008-2009), Sjak Smulders (2007-2008),  
Ted Horbulyk (2008).

Teaching Assistant: Topics in Economic Theory (Honors, Fall 2008),  
Microeconomics II (Winter 2007),  
Energy and Environmental Systems Analysis (Fall 2005 - 2007),  
Principles of Macroeconomics (Winter 2006).

**Universidad de Los Andes, Department of Electrical Engineering**

Instructor: Linear Algebra and Optimization, Fall 2004.

Research Assistant: Angela Cadena (2002-2003), Maria Rueda de Torres (2001-2002).

Teaching Assistant: Energy Economics (2003), Power Systems Design (2001-2002),  
Power System Analysis (2002), Power System Reliability (2003),  
Power Systems Control (2003).

NON-ACADEMIC  
EXPERIENCE

**Energy and Natural Gas Regulatory Commission: Advisor, 2004-2005**

Responsibilities: Development of the regulatory framework to bring electricity to  
rural areas in Colombia.

Development of the regulatory framework for distributed generation  
in Colombia.

Study of the retail electricity system in Colombia.

**Consultoria Colombiana S.A.: Engineering Assistant, 2002**

Responsibilities: Power systems designer and database manager.

HONORS AND AWARDS      Small Research Grants, Ivan Allen College, 2014 (\$18,000)  
Small Research Grants, Ivan Allen College, 2013 (\$12,000)  
Kavli Frontiers of Science Fellow, National Academy of Sciences, 2012.  
Class of 1969 Teaching Fellows, 2011.  
Travel Grant, University of Calgary, 2009.  
Best Paper Presentation, Technology Management Policy Consortium, 2009.  
Graduate Student Research Scholarship, Department of Economics, 2007.  
Young Scientist Summer Program, Institute for Applied Systems Analysis, 2003.

LANGUAGES            Spanish: Mother language.  
English: Excellent.

REFERENCES          **Dr. David W. Keith**  
Gordon McKay Professor of Applied Physics  
School of Engineering and Applied Sciences (SEAS) and  
Professor of Public Policy, Harvard Kennedy School  
Harvard University  
Pierce Hall  
29 Oxford Street  
Cambridge, MA 02138  
USA  
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**Dr. Sjak Smulders**  
Professor Economics  
Faculty of Economics  
Tilburg University  
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5000 LE Tilburg  
The Netherlands  
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**Dr. M. Scott Taylor**  
Professor Economics & Canada Research Chair  
Research Associate NBER, ITI & EEE Program  
Department of Economics, SS 454  
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2500 University Drive, N.W.  
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