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APPOINTMENTS	California Institute of Technology Division of the Humanities and Social Sciences Assistant Professor of Economics William H. Hurt Scholar	2023 – 2023 –
	National Bureau of Economic Research Faculty Research Fellow	2024 –
	Resources for the Future University Fellow Fellow	2023 – 2021–2023
EDUCATION	University of California, Berkeley Ph.D. in Agricultural and Resource Economics Chairs: Solomon Hsiang and Joseph S. Shapiro M.S. in Agricultural and Resource Economics	2021 2018
	Stanford University B.S. in Earth Systems, <i>with honors and distinction</i>	2014
RESEARCH INTERESTS	Environmental and resource economics and policy, ecosystem valuation, climate impacts and adaptation, machine learning, remote sensing	
PUBLISHED PAPERS	“Machine learning predicts which rivers, streams, and wetlands the Clean Water Act regulates” with S. Greenhill, S. Wang, D.A. Keiser, M. Giroto, J.K. Moore, N. Yamaguchi, A. Todeschini, and J.S. Shapiro, <i>Science</i> (2024). Available here.	
	“Accounting for ecosystem service values in climate policy” <i>Nature Climate Change</i> (2022). Available here.	
	“Wetlands, Flooding, and the Clean Water Act” with C.A. Taylor, <i>American Economic Review</i> (2022). Available here.	
	“The effect of large-scale anti-contagion policies on the COVID-19 pandemic” with S. Hsiang, D. Allen, S. Annan-Phan, K. Bell, I. Bolliger, T. Chong, L. Huang, A. Hultgren, E. Krasovich, P. Lau, J. Lee, E. Rolf, J. Tseng, and T. Wu, <i>Nature</i> (2020). Available here.	

WORKING
PAPERS

“Removing Development Incentives in Risky Areas Promotes Climate Adaptation” with P. Liao, S. Pesek, S. Zhang, and M. Walls. Accepted in Principle at *Nature Climate Change*

Global High-Resolution Estimates of the United Nations Human Development Index Using Satellite Imagery and Machine Learning with L. Sherman, J. Proctor, H. Tapia, and S. Hsiang. [Available here.](#)

Accounting for Unobservable Heterogeneity in Cross Section using Spatial First Differences with S. Hsiang. [Available here.](#)

Estimating an Economic and Social Value of Forests: Evidence from Tree Mortality in the American West. [Available here.](#)

Opportunities for Increasing the Environmental Justice Impact of Earth Observations. [Available here.](#)

GRANTS,
FELLOWSHIPS &
AWARDS

“A new era of Earth Action: linking coral health and societal well-being through NASA earth observations” President and Director’s Research Development Fund, Jet Propulsion Laboratory, \$750,000 (with C. Lee) 2024

“Wetland Regulation And Us Rural Economic Development”, USDA National Institute of Food and Agriculture, \$650,000 (with J.S. Shapiro, C. Taylor, and S. Wang) 2024

“New tools for estimating location-specific ecosystem values to inform sustainable management”, William H. Hurt Scholar Fund, \$200,000 (with G. Gkioxari) 2024

“Adapting To Variable Weather: The Roles And Impacts Of Crop Insurance And Conservation Decisions In Rural Communities”, USDA National Institute of Food and Agriculture, \$650,000 (with P. Liao and M. Walls) 2022

“Can removing development subsidies promote adaptation? The Coastal Barrier Resources System as a natural experiment”, Lincoln Institute of Land Policy, \$100,000 (with M. Walls and P. Liao) 2021

“A new approach to measuring the wealth of nations: understanding long-run economic growth using historical aerial photographs”, Riksbankens Jubileumsfond, \$6,218,140 (with A. Madestam, A. Tompsett, and S. Hsiang) 2020

Outstanding Graduate Student Instructor Award, UC Berkeley 2019

Doctoral Fellow, Global Policy Laboratory, UC Berkeley 2017

National Science Foundation Graduate Research Fellowship Program (NSF GRFP) 2016

	The Berkeley Fellowship, UC Berkeley	2016
	Firestone Medal for Excellence in Undergraduate Research, Stanford University	2014
	Dean's Award for Academic Achievement, School of Earth Sciences, Stanford University	2014
INVITED TALKS	2024: Stanford Natural Capital Symposium	
	2023: University of Chicago EPIC; Yale School of the Environment; ASSA Annual Meeting; The Workshop in Environmental Economics and Data Science (TWEEDS); Caltech Geological and Planetary Sciences; Caltech Environmental Sciences and Engineering	
	2022: Harvard University Applied Statistics; The Workshop in Environmental Economics and Data Science (TWEEDS); Environmental Defense Fund	
	2021: Columbia University Sustainable Development; Association of Environmental and Resource Economists (AERE) Summer Conference; World Bank; Online Summer Workshop in Environment, Energy, and Transportation (OSWEET); Resources for the Future; NYU Institute for Policy Integrity	
	2020: Columbia University Interdisciplinary PhD Workshop in Sustainable Development; UC Berkeley Environmental and Resource Economics Seminar	
	2019: NBER Summer Institute; Stanford University SEEPAC Research Lunch; Columbia University Interdisciplinary PhD Workshop in Sustainable Development; UC Berkeley Environmental and Resource Economics Seminar	
	2018: Occasional Workshop in Environmental and Resource Economics. UC Berkeley Climate Economics Workshop	
	2017: UC Berkeley Climate Change Economics Lunch	
WORKSHOP ORGANIZATION	Co-organizer, The Workshop in Environmental Economics and Data Science (TWEEDS)	2025
	Lead organizer, Innovations in the Science and Policy of Water Quality Measurement, Caltech	2024
REFEREEING	American Economic Review; Journal of Environmental Economics and Management; Journal of Health Economics; Journal of Political Economy: Microeconomics; Journal of Public Economics; Nature Communications; Proceedings of the National Academy of Sciences; Resource and Energy Economics	

TEACHING	Division of the Humanities and Social Sciences, Caltech: Ec/BEM/ESE 119 Environmental Economics	2024
	School of International and Public Affairs, Columbia OMAF 6065 Economics of Energy	2022