Amir Sultan Jina
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Education:

2014 Ph.D. Sustainable Development, Columbia University
Dissertation: "Economic Development in Extreme Environments"
Advisor: Douglas Almond
Committee Members: Max Auffhammer, Upmanu Lall, John Mutter, Cristian Pop-Eleches
Doctoral training in economics, econometrics, climate science, remote sensing, environmental science, and ecology
2013 M.Phil., M.A. Sustainable Development, Columbia University
2009 M.A. Climate and Society, Columbia University
2006 B.A.(Mod) Mathematics (First class honours), Trinity College Dublin

Professional Experience:

2017 - Assistant Professor, Harris School of Public Policy, University of Chicago
2014 - 2017 Postdoctoral Scholar, Economics Department, University of Chicago
2013 - 2014 Visiting researcher, Goldman School of Public Policy, UC Berkeley

Affiliations:

2026 - Faculty Affiliate, Abdul Latif Jameel Poverty Action Lab (J-PAL)
2024 - Co-PI, AI for Climate (AICE), UChicago DSI & ICSG
2024 - Co-Director, Human-centered Weather Forecasts Initiative, UChicago
2024 - Chair of Technical Panel (weather), AIM for Scale
2023 - Advisory board, Precision Development (PxD)
2023 - 2025 Advisor on Weather, Innovation Commission for Climate Change, Food Security, and Agriculture
2018 - Faculty Research Fellow, National Bureau of Economic Research
2017 - Faculty Affiliate, Climate Impact Lab
2017 - Faculty Affiliate, Energy Policy Institute at University of Chicago
2016 - Beijer Young Scholar (2nd cohort), Beijer Institute, Stockholm University
2016 Fellow, Global Future Council on Environment, World Economic Forum

Publications (published and under review) (about 6,500 citations, Nov 2026; full list):

"Decision-oriented benchmarking of AI weather models for climate adaptation." (with R. Masiwal, C. Aitken, A. Marchakitus, M. Gupta, K. Kowal, H.A. Pahlavan, T. Yang, Y.Q. Sun, M. Kremer, W.R. Boos, P. Hassanzadeh). (2026). *Under Review, Science Advances.* (link) *Joint senior author.*

"Designing probabilistic AI monsoon forecasts to inform agricultural decision-making." (with C. Aitken, R. Masiwal, A. Marchakitus, K. Kowal, M. Gupta, T. Yang, P. Hassanzadeh, W. Boos, M. Kremer). (2026). *Revise & Resubmit, Proceedings of the National Academy of Sciences.* (link)

"The value of clean water: Experimental evidence from rural India." (with F. Burlig and A. Sudarshan). *American Economic Review* 116, no. 3 (2026): 1148-1187. (link)

"Impacts of climate change on global agriculture accounting for adaptation." (with A. Hultgren, T. Carleton, M. Delgado, D. Gergel, M. Greenstone, T. Houser, S. Hsiang, R. Kopp, K. McCusker, S.B. Malevich, T. Mayer, I. Nath, J. Rising, A. Rode, J. Yuan) *Nature* 642, no. 8068 (2025): 644-652. (link)

"Beliefs, forecasts, and investments: Experimental evidence from India" (with F. Burlig, E Kelley, G. Lane, and H. Sahai). (2024). *Revise & Resubmit, American Economic Journal: Applied Economics.* (Accepted at *Journal of Development Economics* after pre-results review; previously "Long-range forecasts as climate adaptation: Experimental evidence from developing-country agriculture."). (link)

"Valuing the global mortality consequences of climate change accounting for adaptation costs and benefits." (with Tamma A. Carleton, Michael T. Delgado, Michael Greenstone, Trevor Houser, Solomon M. Hsiang, Andrew Hultgren, Robert E. Kopp, Kelly E. McCusker, Ishan B. Nath, James Rising, Ashwin Rode, Hee Kwon Seo, Arvid Viaene, Jiacan Yuan, Alice Tianbo Zhang). *Quarterly Journal of Economics* 137, no. 4 (2022): 2037-2105. (link) *Joint lead author.*

"Labor Disutility in a Warmer World: The Impact of Climate Change on the Global Workforce" (with A. Rode, R.E. Baker, T. Carleton, A.L. D'Agostino, M. Delgado, T. Foreman, M. Greenstone, T. Houser, S. Hsiang, A. Hultgren, R. Kopp, K. McCusker, I. Nath, M. Pecenco, J. Rising, J. Yuan). (2022). *Revise & Resubmit, Journal of Political Economy* (link)

"Up in smoke: California's greenhouse gas reductions could be wiped out by 2020 wildfires." (with Michael Jerrett and Miriam E. Marlier). *Environmental Pollution* 310 (2022): 119888. (link)

"Estimating a social cost of carbon for global energy consumption." (with A. Rode, T. Carleton, M. Delgado, M. Greenstone, T. Houser, S. Hsiang, A. Hultgren, R. Kopp, K. McCusker, I. Nath, J. Rising, J. Yuan). *Nature*. 598: 308-314. (2021). (link)

"ENSO impacts child undernutrition in the global tropics." (with J.K. Anttila-Hughes and G.C. McCord). *Nature Communications*. 12(5785). 2021. (link)

"Inequality and the Biosphere." (with Beijer Young Scholars) *Annual Review of Environment and Resources*. 43 (2018): 61-83. (link)

"Estimating economic damage from climate change in the United States." (with S. Hsiang, R. Kopp, J. Rising, M. Delgado, S. Mohan, DJ Rasmussen, R. Muir-Wood, P. Wilson, M. Oppenheimer, K. Larsen, and T. Houser). *Science*. 356(6345): 1362-1369. 2017. (link) *Joint first author.*

"Extreme air pollution in global megacities." (with M.E. Marlier, R.S. DeFries, and P.L. Kinney) *Current Climate Change Reports*. 2(1): 15-27. 2016. (link)

"The Causal Effect of Environmental Catastrophe on Long-Run Economic Growth: Evidence from 6,700 cyclones." (with S.M. Hsiang) NBER working paper no. 20352. 2014. *Revise & Resubmit, Journal of Political Economy* (link)

"Satellites, Self-reports, and Submersion: Exposure to Floods in Bangladesh." (with R.P. Guiteras, and A.M. Mobarak) *American Economic Review: Papers and Proceedings*. 105(5): 232-36. 2015. (link)

"Geography, Depreciation, and Growth." (with S.M. Hsiang) *American Economic Review: Papers and Proceedings*. 105(5): 252-56. 2015. (link)

"Smallholder farmer cropping decisions related to climate variability across multiple regions." (with S. Wood, M. Jain, R.S. DeFries, and P. Kristjanson), *Global Env. Change*. 25, 163–172. 2014. (link)

"Biophysical and Socioeconomic Factors Associated with Forest Transitions at Multiple Spatial and Temporal Scales." (with M. Jain, C.B. Yackulic, M. Fagan, Y. Lim, M. Marlier, R. Muscarella, P. Adame, R.S. DeFries, M. Uriarte), *Ecology and Society*. 16(3). 2011. (link)

Working Papers and Ongoing Projects:

"Valuing Disaster Prevention: Desert Locust Monitoring and Control" (with J. Gantois, A. Missirian, E. Linnros, A. Tompsett, G. McCord, E. Frank). NBER working paper no. 35215. 2026. (link)

Odisha, India: block-level randomized evaluation of forecast information delivered by interactive voice response. Randomized trial embedded in 38 million farmer dissemination (2026).

Ethiopia: randomized trial within the 2026 scale-up of AI forecasts to 100,000 people through the national hotline, comparing information tailored to farmers' decisions with generic information, and delivery through development agents with direct messages.

With One Acre Fund (Kenya, Nigeria, Rwanda): analysis of AI weather forecast trials and design of new trials around farmers' decisions (Nigeria 2026; Rwanda 2027A, 600 sites, about 12,000 farmers).

"Forecasts at Scale" (with Fiona Burlig, Greg Lane, Erin Kelley): Randomized trial evaluating general equilibrium effects of forecast dissemination to 1 million farmers in Telangana, India.

Books and Reports:

"AI Weather Forecasts for Health: The Case for a Decision-First Approach." (with K. Costa, M. Miller, and J. Trtanj). Institute for Climate and Sustainable Growth, University of Chicago, with support from the Rockefeller Foundation. 2026. *Lead author.* (link)

"Climate Change and the U.S. Economic Future." In *U.S. Energy & Climate Roadmap: Evidence-based Policies for Effective Action.* Energy Policy Institute at the University of Chicago (EPIC). 2021. (link)

"Economic Risks of Climate Change: An American Prospectus." (with T. Houser, S. Hsiang, R. Kopp, M. Delgado, K. Larsen, M. Mastrandrea, S. Mohan, R. Muir-Wood, DJ Rasmussen, J. Rising, and P. Wilson), *Columbia University Press.* 2015. (link)

Selected Grants:

PI, "Building the Next Generation of Climate and Weather Information for Health: A Landscape and Pathways to Progress", Rockefeller Foundation, $350,000 (2026-2027)

Co-PI, "Farmer-Centered AI Weather Forecasts for Africa", Gates Foundation, $2,274,000 (2025-2027)

Co-PI, "Institutionalizing the dissemination of farmer-focused AI forecasts to smallholder farmers in India", J-PAL Innovation in Government Initiative, $127,000 (2025-present)

Co-PI, Global Partnership for Weather Forecast for Farmers, Asian Development Bank, $400,000 (2025-present)

Co-PI, Forecasting the Indian Monsoon, AIM for Scale, $500,000 (2025)

Co-I, AI weather research and training program, AIM for Scale, $860,000 (2024-present)

Co-PI, Human Centered Weather Forecast Initiative, University of Chicago, $1,500,000 (2024-present)

Co-PI, AI for Climate Initiative, University of Chicago, $1,000,000 (2024-present)

Co-PI, "The value of forecasts", J-PAL KCAI, $150,000 (2022-2025)

Co-PI, "The value of forecasts", J-PAL ATAI pilot grant, $75,000 (2020-2023)

Co-I, Robust Decision Making on Energy and Climate Policy, NSF center at U. Chicago (2017-2022)

Co-PI, "Sloan Foundation Energy and Environmental Policy grant for Climate Impact Lab", $600,000 (2018-2020)

Co-PI, "Long-run Environmental Quality and Human Capital Formation: Experimental evidence from schools in Delhi" pilot grant, Tata Center for Development, $50,000 (2018-2020)

Co-PI, "The Indian Climate Prospectus", Tata Center for Development, $300,000 (2018-2020)

Co-PI, "Evaluating economic impacts of passive cooling technologies in Delhi", U. Chicago Urban Labs & EPIC India (2016-2019)

Co-I, IGC Grant "Food Security and Social Stability in Africa", GBP 99,091 (2015)

Co-I, IGC Grant "Indian Climate Early Warning System", GBP 106,003 (2015)

Teaching:

PPHA 39930 (2020-2026) – International Climate Policy, U. Chicago, Harris

PBPL 28728 (2020-2024) – Climate Change and Society, U. Chicago

PPHA 35550 & 57300 (2019-2021) – Economic Development and Policy (MPP, MAIDP), U. Chicago

PPHA 31002 (2017-2018) – Statistics for Data Analysis I, U. Chicago, Harris

Challenges of Sustainable Development, Columbia University, with Jeffrey Sachs: teaching assistant, then co-instructor

Lead curriculum design and content production for Jeffrey Sachs "Age of Sustainable Development" MOOC course. Released as "The Age of Sustainable Development" by J.D. Sachs, Columbia University Press.

Training for national meteorological services: co-designed and co-leads, with the Mohamed bin Zayed University of Artificial Intelligence (MBZUAI), training on AI weather forecasting for meteorological agencies and agriculture ministries from 15 countries, developed with the World Meteorological Organization under AIM for Scale; workshops for national meteorological services in Senegal, Kenya, Ghana, Nigeria and Ethiopia on decision-oriented forecast benchmarks (Gates Foundation, 2025-2027).

Advising:

PhD committees (current positions): Yuqi Song, Harris (Assistant Professor, HKUST); Claire Fan, Harris (Assistant Professor, Lehigh University); James Franke, Geophysical Sciences (Research Assistant Professor, University of Chicago); Ziwei Wang, Geophysical Sciences (Trexquant Investment); Katherine Baird, Harris (US Department of Transportation). Current: Ozma Houck, Harris.

Predoctoral researchers: about 25 from the Climate Impact Lab and other projects have enrolled in PhD programs in environmental and development economics.

Conferences & Invited Presentations:

Post-pandemic, I have largely reduced all travel to focus on childcare and reduce my carbon footprint. I travel very selectively for policy initiatives.

2025-26: Launch of *AI Weather Forecasts for Health*, Rockefeller Foundation and UChicago Institute for Climate and Sustainable Growth, Climate Week NYC (2026); COP30, Belém, representing AIM for Scale (2025)

2021-: Columbia University; University of Illinois, Urbana Champaign; Toulouse School of Economics

2020: Inter-American Development Bank (canceled, COVID-19); Resources for the Future (canceled, COVID-19); School of the Art Institute of Chicago (canceled, COVID-19); Stanford University (postponed, teaching)

2019: University of Gothenburg; University of British Columbia; Simon Fraser University; University of Oslo

2018: ASSA; NBER Summer Institute (EEE)

2017: ASSA; NBER Spring Meeting (EEE); Carnegie Mellon University; Macro and Micro Economics of Climate Change (UCSB); Advances in Estimating Economic Effects from Climate Change Using Weather Observations (Stanford); University of Chicago Booth

pre-2017: ASSA; U. Maryland; U. Chicago Harris (job talk); Heidelberg U.; Duke University; Global Future Council (WEF), ASSA meetings; American Meteorological Society meeting; World Bank (DECRG); Mayor's Office of the City of Chicago; CUNY; NBER Summer Institute (Income Distribution); NEUDC (Brown); Stockholm University, PACDEV (UCLA); UC Berkeley (Dev); UC Berkeley (ARE); NBER Summer Institute (EEE); BREAD (LSE); NEUDC (Boston University); American Geophysical Union Fall Meeting; University of San Francisco; IZA Bonn; ICARUS (U. Michigan); American Geophysical Union Fall Meeting (Outstanding Paper award)

Professional Activities & Service:

Refereeing: *American Economic Journal: Applied Economics; American Economic Journal: Economic Policy; American Economic Review; American Economic Review: Insights; China Economic Review; Climate Change Economics; Climatic Change; Ecological Economics; Demography; Economic Development and Cultural Change; Economic Journal; Environment and Development Economics; Environmental and Resources Economics; Global Environmental Policy; IZA World of Labor; Journal of the Association of Environmental and Resource Economics; Journal of Development Economics; Journal of Economic Growth; Journal of Environmental Economics and Management; Journal of Health Economics; Journal of Political Economy; Journal of Public Economics; National Science Foundation; Nature; Nature Climate Change; Nature Communications; Nature Energy; Proceedings of the National Academy of Sciences; Review of Economic Studies; Review of Economics and Statistics; University of Chicago Press*

Recruitment committees, Harris: Energy (2017-18, 2021-22, 2022-23); International (2018-19); postdocs

Sole external member, UChicago Public Health Department hiring committee in climate and health

Organizer, EPIC energy and environmental economics seminar series, Harris School (three years)

University of Chicago Delhi Center Faculty Steering Committee

University of Chicago Committee on Environment, Geography and Urbanization Faculty Advisory

Museum of Science and Industry Environmental Advisory Board