

MEHA JAIN

School of Natural Resources and Environment
University of Michigan
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EMPLOYMENT

- **University of Michigan, Assistant Professor**
School of Natural Resources and Environment. September 2016 to present.

EDUCATION

- **Stanford University, NSF-SEES Postdoctoral Fellow**
Department of Earth System Science. August 2014 to 2016.
Advisor: David Lobell
- **Columbia University, NSF-GRF Ph.D.**
Department of Ecology, Evolution, and Environmental Biology. Fall of 2008 to Summer 2014.
Advisors: Shahid Naeem and Ruth DeFries
- **Princeton University, A.B., *cum laude***
Department of Ecology and Evolutionary Biology. Fall of 2003 to Spring 2007.
Advisor: Daniel Rubenstein

PUBLICATIONS

1. Fishman, R., **M. Jain**, A. Kishore (Submitted). When Water Runs Out: Adaptation to Gradual Environmental Change in Indian Agriculture.
2. D. Kramer, J. Hartter, A. Boag, **M. Jain**, K. Nicholas, K. Stevens, J. Liu, B. McConnell (Submitted). Top 40 Transformative Questions in Coupled Human and Natural Systems (CHANS) Research
3. Azzari, G., **M. Jain**, D. Lobell (In Review). Towards Fine Resolution Global Maps of Crop Yields: Testing Multiple Methods and Sensors in Three Countries.
4. **Jain, M.**, R.S. DeFries, S. Naeem, A.S. Jina, S.A. Wood, P. West, B. Orlove (In Revision). Adapting Adaptation Research: A Systematic Review of the Climate Adaptation Literature in the Agricultural Sector. *Frontiers in Ecology and the Environment*.
5. **Jain, M.**, A. Srivastava, B. Singh, A. McDonald, K. Royal, M.C. Lisaius, D.B. Lobell (Accepted). Mapping Smallholder Wheat Yields and Sow Dates Using Microsatellite Data. *Remote Sensing*.
6. Mondal, P., **M. Jain**, M. Zukowski, G. Galford, R.S. DeFries (2016). Quantifying fluctuations in the winter cropped area in the Central Indian Highlands. *Regional Environmental Change* 16: 69-82.
7. Feola, G., A.M. Lerner, **M. Jain**, M.J.F. Montefrio, K.A. Nicholas (2015). Understanding Farmer Behavior in Climate Change Adaptation and Sustainable Agriculture: Lessons Learned From Five Case Studies. *Journal of Rural Studies*. 35: 74-84.
8. **Jain, M.**, S. Naeem, B. Orlove, V. Modi, R.S. DeFries (2015). Understanding the Causes and Consequences of Differential Decision-Making in Adaptation Research:

- Adapting to a Delayed Monsoon Onset in Gujarat, India. *Global Environmental Change*. 31: 98-109.
9. Mondal, P., **M. Jain**, R.S. DeFries, G.L. Galford, C. Small (2015). Sensitivity of crop cover to climate variability: Insights from two Indian agro-ecoregions. *Journal of Environmental Management*. 148: 21-30.
 10. Mondal, P., **M. Jain**, A.W. Robertson, G.L. Galford, C. Small, R.S. DeFries (2014). Winter crop sensitivity to inter-annual climate variability in central India. *Climatic Change*. 126: 61-76.
 11. Wood, S., A. Jina, **M. Jain**, P. Kristjanson, R.S. DeFries (2014). Smallholder farmer cropping decisions related to climate variability across multiple regions. *Global Environmental Change*. 25: 163-172.
 12. **Jain, M.**, Y. Lim, J.A. Arce-Nazario, M. Uriarte (2014). Perceptual and socio-demographic factors associated with household water treatment in rural Puerto Rico. *PLoS ONE*. 9(2): 1-8.
 13. **Jain, M.**, D.F.B. Flynn, C.M. Prager, G.M. Hart, C.M. DeVan, F.S. Ahrestani, M.I. Palmer, D.E. Bunker, J.M.H. Knops, C.F. Jouseau, and S. Naeem (2014). The importance of rare species: A trait based assessment of the potential for rare species to contribute to ecosystem function in tall-grass prairies. *Ecology and Evolution*. 4(1): 104-112.
 14. **Jain, M.**, P. Mondal, R.S. DeFries, C. Small, G.L. Galford (2013). Mapping cropping intensity of smallholder farms – a comparison of methods using multiple sensors. *Remote Sensing of Environment*. 134: 210-223.
 15. Balvanera, P., M. Uriarte, L. Almeida-Lenero, A. Altesor, F. DeClerck, T. Gardner, J. Hall, A. Lara, P. Lateral, M. Pena-Claros, D.M.S. Matos, L.P. Romero-Duque, A.L. Vogl, L.F. Arreola, A.P. Caro-Borrero, F. Gallego, **M. Jain**, C. Little, R. de Oliveira Xavier, J.M. Paruelo, J.E. Peinado, L. Poorter, N. Ascarrunz, F. Correa, M.B. Cunha-Santino, A.P. Hernandez-Sanchez, M. Vallejos (2012). Ecosystem Services Research in Latin America: The state of the art. *Ecosystem Services*. 2: 56-70.
 16. **Jain, M.***, C.B. Yackulic*, M. Fagan*, A. Jina, Y. Lim, M. Marlier, R. Muscarella, P. Adame, R.S. DeFries, M. Uriarte (2011). Biophysical and Socioeconomic Factors Associated with Forest Transitions at Multiple Spatial and Temporal Scales. *Ecology and Society*. 16(3): 15.
* first authorship was shared equally by the starred authors.
 17. Odadi, W., **M. Jain**, S. Van Wieren, H.T. Prins, D.I. Rubenstein (2011). Facilitation between bovids and equids on an African savanna. *Evolutionary Ecology Research*. 13:237-252.
 18. Flynn, DFP. N. Mirotchnick, **M. Jain**, M.I. Palmer, S. Naeem (2011). Functional and phylogenetic diversity as predictors of biodiversity-ecosystem-function relationships. *Ecology*. 92(8): 1573-1581.
 19. Forbes, T., V. Goss, **M. Jain**, P.C. Burns (2007). Structure Determination and Infrared Spectroscopy of K(UO₂)(SO₄)(OH)(H₂O) and K(UO₂)(SO₄)(OH). *Inorganic Chemistry*. 26(18):7163-7168

FELLOWSHIPS AND GRANTS

- NASA (\$262,612). New Investigator Program (NIP) in Earth Science Grant.

- **National Science Foundation** Sustainability Postdoctoral Fellowship (SEES; \$487,020). Fall 2014 –2017.
- **Google Earth Engine Research Award** (\$62,867). Summer 2014-2015.
PIs: G. Galford, R.S. DeFries; Co-PIs: **M. Jain**, G. Fiske, P. Mondal
- **National Science Foundation** Doctoral Dissertation Improvement Grant (DDIG; \$14,488). Spring 2013 to Fall 2015.
- **National Science Foundation** Graduate Research Fellowship (NSF GRF; \$150,000). Fall 2009 to 2012.
- **National Geographic** Young Explorers Grant (\$5,000). Fall 2011
- **Advanced Consortium on Cooperation, Conflict, and Complexity** Fellow (\$3,000). Fall 2011
- **NASA** Land Cover and Land Use Change Grant (\$300,000) Summer 2011 to 2014.
PIs: R.S. DeFries, C. Small, G. Galford; Collaborator: M. Lal, **M. Jain**
- **Compton Foundation** Mentor Fellowship (\$36,000). Fall 2007 to 2008.
- **Becky Colvin Fund**, Undergraduate Thesis Research (\$2,500). Summer 2006

AWARDS AND HONORS

- **CHANS (Coupled Human and Natural Systems) Fellow**. NSF CHANS-Net 2012
- **Voted Among Best TAs**, Columbia Spectator, Columbia University. 2011
- **Top Seminar Presentation**, Columbia University E3B Seminar. 2009, 2010.

TEACHING AND ADVISING EXPERIENCE

- **Teaching Assistant**, Columbia University. 2009 – 11
Environmental Biology II (Introductory Biology for Undergraduates), Spring 2011
Sustainable Development (Undergraduate), Fall 2010
Environmental Biology I (Introductory Biology for Undergraduates), Fall 2009
- **Guest Lecturer**, Columbia University and American Museum of Natural History (AMNH). 2010-14
Food Ecology and the Environment, Columbia University, Summer 2014
Biodiversity and Climate Change, Columbia University. Spring 2013
Undergraduate Conservation Biology, Columbia University, Spring 2010 – 2011
High School Science Seminar, AMNH, Spring 2011
- **Tutor, Boys and Girls Club**. Menlo Park, CA. 2014-2015.
- **Volunteer in Children’s Discovery Room**, AMNH. 2008-13.
- **Girls’ Science Day and Middle School Experiment Leader**, Columbia University. 2009-13
- **Graduate Student Advisory Council, Department Student Rep.**, Columbia University. 2008-14

PROFESSIONAL SERVICE AND SKILLS

- **Skills:** Software: Fluent in R, ENVI, Google Earth Engine, ArcGIS, QGIS, Amazon Cluster Computing, Google Cloud Computing, and APSIM Crop Modeling. Versed in Python, IDL, and NetLogo. Languages: Fluent - Hindi, Conversational - Gujarati, French.

- **Reviewer:** Science Advances, Global Change Biology, Ecology Letters, Geophysical Research Letters, Remote Sensing of Environment, Remote Sensing, Global Environmental Change, Ecology and Society, Journal of Development Economics, International Journal of Remote Sensing, Regional Environmental Change, Human Ecology
- **Member:** American Geophysical Union (AGU)

SELECT PRESENTATIONS

- **2014 American Geophysical Union.** San Francisco, CA – Irrigation as an Adaptation Strategy to Rainfall Variability. Poster.
- **2013 American Geophysical Union.** San Francisco, CA – Mapping Cropping Intensity Using MODIS and Landsat. Invited Talk.
- **2013 NASA Land Cover Land Use Change Conference.** Rockville, MD – Mapping Cropping Intensity of Smallholder Farms in South Asia. Poster.
- **2012 American Geophysical Union.** San Francisco, CA – Mapping Agricultural Vulnerability to Climate Variability in Northwest India. Poster Presentation.
- **2012 ICARUS Adaptation Conference.** Columbia University – Mapping Agricultural Vulnerability to Climate Variability in Northwest India. Oral Presentation.
- **2012 Interdisciplinary Ph.D. Workshop in Sustainable Development.** Columbia University – Mapping Agricultural Vulnerability to Climate Variability in Northwest India. Oral Presentation.
- **2012 NASA Land Cover Land Use Change Conference.** Rockville, MD – Mapping Cropping Intensity of Smallholder Farms in South Asia. Poster.
- **2012 Governance of Adaptation Symposium.** Amsterdam, Netherlands – Framework for analyzing adaptation in socio-ecological systems. Oral Presentation
- **2012 American Association of Geographers.** New York, NY – Mapping Agricultural Vulnerability to Climate Variability in Northwest India. Oral Presentation.
- **2011 Student Conference on Conservation Science.** New York, NY – Agricultural Adaptation to Climate Variability: Farmers’ Responses to a Variable Monsoon. Oral Presentation.
- **2011 ICARUS Adaptation Conference.** University of Michigan – Agricultural Adaptation to Climate Variability: Farmers’ Responses to a Variable Monsoon. Oral Presentation.
- **2010 Student Conference on Conservation Science.** Bangalore, India – Forest Conservation and Ecosystem Services in Community-Managed Forests in India. Poster.

REPORTS AND FILMS

- **Jain, M.** (2013). Indian Farmers Cope with Climate Change and Falling Water Tables. Water Currents. [National Geographic News Watch](#).
- Naeem, S., P. Olmsted, J. Sircely, **M. Jain**, S. Smukler, C. Ingram (2010). Ecosystem services: A Primer for Biodiversity Conservation. Natural Resources Management and Development Portal. USAID.
- **Jain, M.** (2010). Conservation wisdom of a pastoral community in the Aravalli Hills, Rajasthan, India. People in Conservation. Kalpavriksh. 3(1).