Eugenio Y. Arima

Curriculum Vitae

Dept. of Geography and Environment
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Education

2005, PhD, Geography, Michigan State University.
Dissertation Title: Loggers and Forest Fragmentation: Behavioral and Computational Models of Road Building in the Amazon Basin. Advisor: Dr. Robert T. Walker
1997, MS, Agricultural Economics, Pennsylvania State University
Thesis Title: Cattle Ranching in the Brazilian Amazon: Subsidies, Efficiency, And Inequality.
1992, BS, Agricultural Science, University of Brasília - Brazil

Professional Experience

2011 - present, Assistant Professor, Dept. of Geography and the Environment, University of Texas.
2006 - 2011, Assistant Professor, Environmental Studies Program, Hobart & William Smith Colleges.
2005 - 2006, Research Associate, Department of Geography, Michigan State University.
2001 - Present, Visiting Researcher, Instituto do Homem e Meio Ambiente da Amazônia, Belém, Brazil.
1992 - 2001, Adjunct Researcher, Instituto do Homem e Meio Ambiente da Amazônia, Belém, Brazil.

Publications

Note: All peer reviewed publications available upon request.

Refereed Journal Articles

Arima, E. Y., P. Richards, R. T. Walker M. Caldas. 2011. Statistical confirmation of indirect land use change in the Brazilian Amazon. *Environmental Research Letters* 6 (2011) 024010 doi:10.1088/1748-9326/6/2/024010.

Walker, R., **E. Y. Arima**. 2011. A comment on smallholder timber sale decisions on the Amazon frontier. *Ecological Economics* 70 (2011): 1565-1567.

Walker, R., C. Simmons, S. Aldrich, S. Perz, **E. Arima**, M. Caldas. 2011. The Amazonian theater of cruelty. *Association of American Geographers* 101(5): 1156-1170.

Simmons, C. S., R. Walker, S. Perz, S. Aldrich, M. Caldas, R. Pereira, C. Fernandes, **E. Arima**. 2010. Doing it for themselves: direct action land reform in the Brazilian Amazon. *World Development* 38(3): 429-444.

Caldas, M., C. Simmons, R. Walker, S. Perz, S. Aldrich, R. Pereira, F. Leite, **E. Arima**. 2010. Settlement formation and land cover and land use change: a case study in the Brazilian Amazon. *Journal of Latin American Geography* 9(1): 125-144.

Walker, R., N. Moore, **E. Arima**, S. Perz, C. Simmons, M. Caldas, D. Vergara, C. Bohrer. 2009. Protecting the Amazon with Protected Areas. *Proceedings of the National Academy of Sciences* 106(26): 10582-10586.

Walker, R., J. Browder, **E. Arima**, C. Simmons, R. Pereira, M. Caldas, R. Shirota, R. de Zen. 2009. Ranching and the new global range: Amazônia in the 21st century. *Geoforum* 40(5): 732-745.

Perz, S., M. Caldas, R. Walker, **E. Arima**, C. Souza Jr. 2008. Road Networks and Forest Fragmentation in the Amazon: Explanations for Local Differences with Implications for Conservation and Development. *Journal of Latin American Geographers* 7(2): 85-104.

Arima, E. Y., Walker, R. T., Sales, M., Souza Jr., Perz, S. G. 2008. The fragmentation of space in the Amazon basin: emergent road networks. *Photogrammetric Engineering and Remote Sensing* 74(6): 699-709.

Pontius Jr., R. G., R. Walker, R. Yao-Kumah, **E. Arima**, S. Aldrich, M. Caldas, and D. Vergara. Quantitative Assessment for a Model of Amazonian Deforestation. 2007. *Annals of the Association of American Geographers* 97 (4): 677-695.

Arima, E., C. S. Simmons, R. Walker, and M. A. Cochrane. 2007. Fire in the Brazilian Amazon: a spatially explicit model for policy impact analysis. *Journal of Regional Sciences* 47 (3):541-567.

Moore, N., **E. Arima**, R. Walker, and R. R. Silva. 2007. Uncertainty and the changing hydroclimatology of the Amazon. *Geophysical Research Letters* 34 (L14707):doi:10.1029/2007GL030157.

Simmons, C. S., R. T. Walker, **E. Y. Arima**, S. P. Aldrich, and M. M. Caldas. 2007. The Amazon land war in the South of Pará. *Annals of the Association of American Geographers* 97 (3):567-592.

Perz, S., M. Caldas, **E. Arima**, R. Walker. 2007. Socio-spatial Processes of Unofficial Road Building in the Amazon: Socioeconomic and Biophysical Explanations. *Development and Change* 38(3): 531-553.

Perz, S., C. Overdevest, M. M. Caldas, R. T. Walker, **E. Y. Arima**. 2007. Unofficial road building in the Brazilian Amazon: dilemmas and models for road governance. *Environmental Conservation* 34(2): 1-10.

Caldas, M., R. Walker, **E. Arima**, S. Perz, S. Aldrich, and C. Simmons. 2007. Theorizing Land Cover and Land Use Change: The Peasant Economy of Amazonian Deforestation. *Annals of the Association of American Geographers* 97(1): 86-110.

Pfaff, A., J. Robalino, R. Walker, E. Reis, S. Perz, C. Bohrer, S. Aldrich, **E. Arima**, M. Caldas, W. Laurance, and K. Kirby. 2007. Road investments, spatial spillovers and deforestation in the Brazilian Amazon. *Journal of Regional Science* 47(1): 109-123.

Aldrich, S., R. Walker, **E. Arima**, M. Caldas, J. Browder, and S. Perz. 2006. Land-Cover and Land-Use Change in the Brazilian Amazon: smallholders, ranchers, and frontier stratification. *Economic Geography* 82(3): 265-287.

Perz, S., **E. Y. Arima**, C. Souza Jr., M. Caldas, A. Brandão, F. Souza and R. Walker. The dilemma over unofficial roads in the Amazon [in Portuguese]. 2005. *Revista Ciência Hoje*.

Arima, E., Walker, R. T., Perz, S., and Caldas, M. 2005. Loggers and Forest Fragmentation: Behavioral models of road building in the Amazon basin. *Annals of the Association of American Geographers*, 95 (3): 525-541.

Hupy, J. P., S. Aldrich, R. J. Schaetzl, P. Varnakovida, **E. Y. Arima**, J. Bookout, N. Wiangwang, A. Campos, and K. McKnight. 2005. An integrative physical geography field experience: mapping the soils, vegetation, and landforms of a part of SW Michigan. *The Professional Geographer* 57(3): 438-451.

Walker, R. T., S. A. Drzyzga, Y. Li, J. Qi, M. Caldas, **E. Y. Arima**, and D. Vergara. 2004. A behavioral model of landscape change in the Amazon basin: the colonist case. *Ecological Applications* 14 (4 - Supplement):s299-s312.

Simmons, C. S., R. T. Walker, C. H. Wood, **E. Y. Arima**, and M. Cochrane. 2004. Wildfires in Amazonia: A pilot study examining the role of farming systems, social capital, and fire contagion. *Journal of Latin American Geography* 3(1): 81-96.

Arima, E. Y., and C. Uhl. 1997. Ranching in the Brazilian Amazon in a national context: economics, policy, and practice. *Society and Natural Resources* 10 (5):433-451.

Work in Progress

Walker, R., **E. Y. Arima**, J. Messina, M. Caldas, D. Vergara, and M. Sales. Road networks and forest fragmentation in Amazônia. *Landscape Ecology*, revise and resubmit.

Pfaff, A., J. Robalino, R. Walker, S. Perz, W. Laurance, C. Bohrer, S. Aldrich, **E. Y. Arima**, M. Caldas, K. Kirby. Heterogeneous Transport Impacts and Clean Development: nonmono-Thunic deforestation from roads in the Brazilian Amazon. *The B.E. Journal of Economic Analysis & Policy*, revise and resubmit.

Arima, E. Y., R. T. Walker, R. Pereira, T. Feitosa. Spontaneous colonization at the end of the road: the case of Central Amazonia, draft.

Arima. E. Logging roads, forest fragmentation, and the problem of Steiner, draft.

Technical Volume

Schneider, R., **E. Y. Arima**, A. Verissimo, C. Souza Jr., and P. Barreto. 2002. *Sustainable Amazon: limitations and opportunities for rural development.* Edited by W. Bank, Environmental Series. Washington, DC: World Bank.

Arima, E., P. Barreto, and M. Brito. 2005. *Cattle ranching in the Amazon: trends and implications for environmental conservation.* Belém, Brazil: IMAZON.

Book Chapters

Schroeder, W., A. Alencar, **E. Arima**, and A. Setzer. 2009. The spatial distribution and interannual variability of fire in Amazonia. **In:** *Amazonia and Global Change*, eds. M. Keller, J. C. H. Gash and P. S. Dias.

Walker, R., S. Perz, **E. Arima**, and C. Simmons. 2010. The Transamazon Highway: past, present, future. **In:** *Engineering Earth: the Impacts of Megaengineering Projects*, ed. S. D. Brunn, Springer Verlag.

Simmons, C. S., R. Walker, **E. Arima**, S. Aldrich, and M. Caldas. A guerra Amazônica pela terra

no Sul do Pará. **In:** *Sociedade, Território e Conflitos: BR-163 em Questão*, org. E. Castro. Belém, UFPA/NAEA, 2008 (in Portuguese).

Barreto, P., R. Pereira, and **E. Arima**. A pecuária e o desmatamento na Amazônia na era das mudanças climáticas. **In:** *Recursos Naturais e crescimento econômico*, eds. A. B. Coelho, E. C. Teixeira, and M. J. Braga. Viçosa, MG, 2008 (in Portuguese).

Costa, F., Caixeta Filho, J. V. and **Arima, E**. The impact of transportation costs on land use: the case of transportation logistics of grains in Amazônia. **In**: *Transporte e logística em sistemas agroindustriais*. Caixeta Filho, J. V. e Gameiro, A. H. (coord). Editora Atlas, São Paulo, 2001. (In Portuguese).

Arima, E. Description of households recipient of rural credit in Amazônia. **In**: *Campesinato e Estado na Amazônia*. Tura, L. R. and Costa, F. A. (eds). Brasília, Brasília Jurídica: FASE, p. 107-128, 2000. (In Portuguese).

Arima, E. The spatial distribution of rural credit in Amazônia. **In**: *Campesinato e Estado na Amazônia*. Tura, L. R. and Costa, F. A. (eds). Brasília, Brasília Jurídica: FASE, p. 47-61, 2000. (In Portuguese).

Other non-refereed publications

Arima, E. and A. Verissimo. 2002. Price of wood in logging centers near five national forests in Amazônia. Brasília: Ministério do Meio Ambiente - Programa Nacional de Florestas. 29 p. (In Portuguese).

Arima, E. and P. Barreto. 2002. Profitability of wood extraction in public and private lands near national forests in Amazônia. Brasília: Ministério do Meio Ambiente - Programa Nacional de Florestas. 49 p. (In Portuguese).

Arima, E. and A. Verissimo. 2001. Brazil in Action: risks and opportunities for development in Amazônia. Cadernos Konrad Adenauer. Year II, n. 04. pp. 79-99. (In Portuguese).

Barreto, P., **E. Arima** and A. Verissimo. 2001. National forests in Amazônia: the opinion of loggers and stakeholders. SIAGEF - IPEF Annals. pp 162-163. (In Portuguese).

Arima, E. 1998. Subsidies, efficiency, and inequality: the ranching sector in the Brazilian Amazon. **In:** D. R. Aguiar & J. B. Pinho (Eds.) *O Agronegócio Brasileiro: Desafios e Perspectivas*, Vol II, Brasília, SOBER. pp. 479-496. (In Portuguese).

Conference and Seminar Presentations

- Arima, E., R. Walker, et al. Globalization of the cattle economy in the Amazon: an opportunity to overcome inequality? Latin American Studies Association Annual Meeting, Rio de Janeiro, June 2009.
- Arima, E., R. Walker, M. Sales, C. Souza Jr., S. Perz. The fragmentation of space in the Brazilian Amazon: emergent road networks. LBA/NASA Scientific Conference, November 2008.
- Arima, E., R. Walker, J. Browder. Globalization and the new cattle economy in the Brazilian Amazon: a new hamburger connection? 2008 Annual Meeting of the Association of American Geographers, April 2008.
- Arima, E., R. Walker, A. Pfaff. Deforestation in the Amazon: modeling the impact of policy. 2007 Annual Meeting of the Association of American Geographers, April 2007.
- Arima, E., R. Walker, M. Sales, Souza Jr., A. Brandão. Simulating forest fragmentation in the Amazon: the case of Terra do Meio. 2006 Annual Meeting of the Association of American Geographers, April 2006.
- Arima, E. Logging roads in the Amazon: a two-step GIS optimization model. 2005 Annual Meeting of the Association of American Geographers, April 2005.
- Arima, E. Thirty years of development and destruction in the Amazon. Chair of panel. 2005 Annual Meeting of the Association of American Geographers, April 2005.
- Arima, E.; Walker, R.; Perz, S. and Caldas, M. Logging roads in the Amazon Basin: building process and modeling challenges. III LBA Scientific Conference, Brasília, July 2004.
- Arima, E.; Walker, R.; Perz, S. and Caldas, M. Simulating logging roads expansion in the Brazilian Amazon. 2004 Annual Meeting of the Association of American Geographers, April 2004.
- Arima, E.; Walker, R.; Perz, S. and Caldas, M. Spatial process of logging roads extension in the Brazilian Amazon. 2003 Annual Meeting of the Association of American Geographers, March 2003.
- Arima, E. Land use in Amazônia: incentives and regulations. Dynamics in The Amazon: Social Science Debates and the Struggle for Synthesis. II LBA Scientific Conference, Manaus, July 2002.
- Arima, E. Land use in Amazônia: patterns, public policy and development. National Seminar on Amazon Development: the Avança Brasil Program Debate. Brasília, April 9, 2001 [in Portuguese].
- Arima, E.; Chomitz, K.; Schneider, R. and Thomas, T. Optimizing land use in Amazônia: the role of incentives and regulation. USAID Amazon Program Annual Meeting. Rio Branco - AC, November 2000.
- Arima, E. 30 years of Transamazon: infrastructure projects and their demographic and environmental significance. XII Population Studies Brazilian Meeting. Caxambu - MG, October 2000 [in Portuguese].
- Arima, E. Human capital and rural credit in Pará, Brazil: new evidences of old problems. 37th Brazilian Conference of Agricultural Economics and Rural Sociology. Foz do Iguaçu - PR, July 1999 [in Portuguese].
- Arima, E. and Uhl, C. Ranching in Eastern Amazônia: present and prospects. In: Common Ground: Interdisciplinary Approaches to Biodiversity Conservation and Land Use Dynamics in the New World. Belo Horizonte - MG, 1995 [in Portuguese].

Courses Routinely Taught

• Intro GIS

- Advanced GIS
- Human Geography and Global Economy
- Global Climate Change

Awards and Scholarships

2006 Gil Chin Lim Award for outstanding doctoral dissertation in Global Studies, International Studies Program, Michigan State University.
2004 Kenneth E. Corey Research Enhancement Award, College of Social Science, Michigan State University.
2003 Tinker Field Research Grant, Center of Latin American and Caribbean Studies (CLACS), Michigan State University.
2003 Graduate Office Fellowship Award, Michigan State University.
2002 - 2003 Best Graduate Student of the Year Award given by the Department of Geography.
2001 - 2004 Graduate Research assistantship from the Department of Geography.
1995 - 1997 ADC Brazil Training Program/USAID Award - Masters Program at Pennsylvania State University.
1989 -1990 Initiation in Science Scholarship from CNPq (Brazilian Research Council).

Professional Affiliations

- Association of American Geographers
- Conference of Latin Americanists Geographers
- Latin American Studies Association

Language Skills

Portuguese: mother language
Spanish: communicate

Programming Skills

IDL (remote sensing, GIS)
Stata, Matlab (statistics)
ArcInfo AML, Python (GIS).

Current Grants

'Shifting Fire Regimes of the United States, Australia and the Brazilian Amazon: The Role of Climate Change, Land Use, and Mitigation Efforts' (Co-Principal Investigator), National Aeronautics and Space Administration, 2011-2013, $88,390.

'Collaborative Research: Territorializing Exploitation Space and the Fragmentation of the Amazon Forest' (Project Leader and Principal Investigator), National Science Foundation, 2008-2012, $344,258.

'Biodiversity implications of forest disturbance and related landscape dynamics in the Brazilian Amazon' (Co-Principal Investigator), National Aeronautics and Space Administration, 2007-2011, $1,111,163.

'Crossing Boundaries and Exploring Biodiversity Conservation Using Information Technologies' (Co-Principal Investigator), National Science Foundation, 2008-2011, $1,399,004.

Past Grants

'Collaborative Proposal: Globalization, Deforestation, and the Cattle Sector of the Brazilian Amazon' (Co-Principal Investigator), National Science Foundation, 2006-2010, $314,976.

'Future scenarios of economic and sustainable development in Amazônia', (Project Leader), The Ford Foundation, 1999-2001, $240,000.

'The Cattle Ranching Economy and the Future of the Amazon Forest', (Project Leader) The Ford Foundation, 2005-2006, $160,000.

'Sustainable Communities and Landscapes: A Proposed Program to Sustain Natural Ecosystems and Enhance Local Livelihoods in Brazils Amazon and Atlantic Forest Regions', USAID, 2003-2007, (Co-Principal Investigator, partial funding),$5,345,918.

'Coherent Public Policies for a Sustainable Amazon', (Co-Principal Investigator) The Ford Foundation, 2002-2004, $350,000.

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