

ZACHARY JOHN CHRISTMAN

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Academic Positions

- 2012-present Rowan University, Glassboro, New Jersey
Assistant Professor, Department of Geography and Environment (*beginning 1 September*)
- 2011-2012 Middlebury College, Middlebury, Vermont
Visiting Assistant Professor, Department of Geography
- 2010-2011 Rutgers, The State University of New Jersey, Piscataway, New Jersey
Postdoctoral Research Associate, *Environmental Disturbance in the Greater Yucatán*.

Education

- 2010 Clark University, Graduate School of Geography, Worcester, Massachusetts
Ph.D. in Geography, Masters of Arts in Geography
Dissertation title: *Land Change in Central Mexico: Landscape Heterogeneity, Natural Variability, and Classification Uncertainty*
Committee: Dr. John Rogan (co-advisor), Dr. B. L. Turner, II (co-advisor)
Dr. J. Ronald Eastman, and Dr. Mark Friedl (Boston University)
- 2001, 2002 University of Pennsylvania, College of General Studies, Philadelphia, Pennsylvania
Post-baccalaureate courses in Archaeology and Geographic Information Systems
- 2001 University of Pennsylvania, College of Arts and Sciences, Philadelphia, Pennsylvania
Bachelors of Arts *cum laude* with distinction in Anthropology; Fine Arts Minor

Research Interests

Land Change; Remote Sensing; Geographic Information Systems and Science; Data Integration and Uncertainty Modeling; Connecting Science with Policy and Practice; Landscape Ecology and Biogeography; Latin America

Publications

Peer-reviewed Publications

- Christman, Z., and J. Rogan. 2012. Error propagation in raster data integration: impacts on landscape composition and configuration. *Photogrammetric Engineering and Remote Sensing* 78(6):617-624.
- Monzón Alvarado, C. M., S. Cortina-Villar, B. Schmook, A. Flamenco, Z. Christman, L. Arriola. *in press*. Land-use Decision-making After Large Scale Forest Fires: Analyzing Fires as a Driver of Deforestation in Laguna del Tigre National Park, Guatemala. *Accepted to Applied Geography in May 2012*.
- Brenner, J. C., Z. Christman, J. Rogan. 2012. Segmentation of Landsat Thematic Mapper Imagery Improves Buffelgrass (*Pennisetum ciliare*) Pasture Mapping in the Sonoran Desert of Mexico. *Applied Geography* 34:569-575.
- Neeti, N., J. Rogan, Z. Christman, J. R. Eastman, M. Millones, L. Schneider, E. Nickl, B. Schmook, B. L. Turner II, and B. Ghimire. 2012. "Mapping seasonal trends in vegetation using AVHRR-NDVI time series in the Yucatán Peninsula, Mexico." *Remote Sensing Letters* 3(5):443-452.
- Rogan, J., L. Schneider, Z. Christman, M. Millones, D. Lawrence, B. Schmook. 2011. Hurricane Disturbance Mapping using MODIS EVI Data in the South-Eastern Yucatán, Mexico. *Remote Sensing Letters*. 2(3):259-267
- Rogan, J., N. Bumbarger, D. Kulakowski, Z.J. Christman, D.M. Runfola, S.D. Blanchard. 2010. Improving forest type discrimination with mixed lifeform classes using fuzzy classification thresholds informed by field observations. *Canadian Journal of Remote Sensing* 36(6):699-708.

Other Publications

- Christman, Z. 2012 *in press*. "Mexico", in Philander, S. George, and Golson, J. Geoffrey. *Encyclopedia of Global Warming and Climate Change*, Second Edition. (*publication June 2012*)

Christman, Z. 2011. “From the U.S. Global Change Research Act (1990) to the Climate Change Science Program,” chapter 5 in Kasperson, Roger, and Mimi Berberian. 2011. *Integrating Science and Policy—Vulnerability and Resilience in Global Environmental Change*. Earthscan, London. pp 131-150.

Christman, Z., J. Rogan. 2010. “Raster data transformation for land change analyses: Combined impacts of reprojecting and rescaling categorical maps on landscape composition and configuration.” In Tate, N. and P. Fisher (eds.) 2010. *Accuracy 2010—Proceedings of the Ninth International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences*. 20-23 July, 2010. Leicester, UK.

Christman, Z. 2010. Holocene book review: *The Environment and World History*. Edited by Edmund Burke III and Kenneth Pomeranz, Berkeley CA: University of California Press, 2009, 361pp. *The Holocene* 20: 303-304.

Selected Publications in Process

Pearsall, H., and **Z. Christman**. *in review*. Tree-lined lanes or vacant lots? Evaluating non-stationarity between urban greenness and social structure in Philadelphia, Pennsylvania, USA, with geographically weighted regression. *Submitted to Applied Geography in June, 2012*.

Cuba, N., J. Rogan, **Z. Christman**, C. Williams, L. Schneider, D. Lawrence, M. Millones. *in review*. Modeling dry season deciduousness in Mexican Yucatán forest using MODIS EVI data (2000-2011). *Submitted to GIS and Remote Sensing in May, 2012*.

Márdero Jiménez, S. S., E. C. Nickl, B. Schmook, L. Schneider, J. Rogan, **Z. Christman**, D. Lawrence. *in review*. Sequías en el Sur de la Península de Yucatán: Análisis de la variabilidad anual y estacional de la precipitación. *Submitted to Investigaciones Geográficas in June 2011*.

Malizia, N., J. Rogan, B. L. Turner, II, and **Z. Christman**. *in review*. Examining Interannual Variation of Deciduousness in the Seasonally Dry Tropical Forests of the Southern Yucatan. *Submitted revised manuscript to Remote Sensing of Environment in October 2010*

Selected Recent Presentations

2012 “Geographic Information Providers and Crisis Response during Hurricane Irene” co-authored with Hamil Pearsall. *Presentation at the 2012 Meeting of the Association of American Geographers*. New York, New York.

“Effect of Hurricanes on fire regimes in semi-deciduous dry forests in Yucatan, Mexico” co-authored with Laura Schneider (*presenter*), John Rogan, Zachary Christman, Irene Zager, Birgit Schmook, and Miguel Mendez. *Presentation at the 2012 Meeting of the Association of American Geographers*. New York, New York.

2011 “Possibility, Uncertainty, and Confusion in Land Change Analyses—a case study from Central Mexico” *Presentation at the 2011 Meeting of the Association of American Geographers*. Seattle, Washington.

Selected Awards

2012 Collaborator, National Geographic Society Committee for Research and Exploration, “*Drought or Drowning?: Managing rainfall, surface water, and runoff in Precolumbian Chiapas, Mexico*,” (with Dr. Charles Golden, Brandeis University, PI, and Dr. Andrew Scherer, Brown University), \$20,000

2006-2009 Fellow, NASA Earth System Sciences Fellowship, “*Disaggregating Phenological Variation from Discrete Land-Cover Change in the Rio Lerma-Chapala Watershed, Mexico*,” (Dr. B. L. Turner II, Clark University [now Arizona State University] Advisor/PI), \$84,000

2009 Research Assistantship, Clark University Graduate School of Geography

2003-2006 Teaching Assistantship, Clark University Graduate School of Geography