

John Rogan, PhD.

Professional Preparation

The University of Arizona Geography B.A. 1996
The University of Arizona Geography M.A. 1998
San Diego State/UC Santa Barbara Geography Ph.D. 2004

Appointments

Associate Professor of Geography, Graduate School of Geography and George Perkins Marsh Institute, Clark University, Worcester Massachusetts (August 2003-present)
Adjunct Associate Professor of Biology, Clark University, Worcester Massachusetts (August 2007-present)
Director Human-Environment Regional Observatory (HERO) Program, Clark University, Worcester Massachusetts (March 2012-present)

Awards and Honours

2013: ESRI Award for Best Scientific Paper in Geographic Information Systems (Association of Photogrammetry and Remote Sensing)
2012: Boeing Award for Best Paper in Image Analysis and Interpretation (Association of Photogrammetry and Remote Sensing).
2008: Best Paper Award for Early Career Scholars in Remote Sensing (Association of American Geographers Remote Sensing Specialty Group). Presented at the Annual Meeting of the Association of American Geographers, Boston, MA, March 2008
2008: Hayden Junior Faculty Fellow for excellence in teaching and scholarship (Clark University)
2005: Clark University Hodgkins Junior Faculty Award (Clark University)
2004: University Consortium for Geographic Information Science (UCGIS) Environmental Systems Research Institute (ESRI) Young Scholars Award.
2004: LEICA Geosystems Award for Best Scientific Paper in Remote Sensing (Association of Photogrammetry and Remote Sensing).

Grants

PI – John Rogan, J. 2016, Ocean Park Conservation Foundation. Assessing the conservation potential of the Amur Tiger in Northeast China. \$10,000 (in review)

PI – John Rogan, 2016. Cooperative Agreement with the DigitalGlobe Foundation to allow Clark University to access the DigitalGlobe image archive.

PI - John Rogan, Co-PI –Nicholas Cuba. Oxfam America. Geographic analysis of the territorial overlap between extractive industries and livelihoods in Honduras, \$23,000

Rogan, J., and Z. Zhu, 2016, Edna Baily Sussman Fund, Mapping the impact of tree planting programs in gateway cities in Massachusetts, \$6000

PI – Anthony Bebbington and John Rogan. Oxfam America. Mapping Overlaps between Extractive Industries, Water and Agriculture in Ghana and Peru. Amount – \$49,908. Period – 1/4/12 to 8/15/12

PI – John Rogan, Co-PI – Deborah Martin. National Science Foundation. REU Site: Mapping Beetles, Trees, Neighborhoods, and Policies: A Multi-Scaled, Urban Ecological Assessment of the Asian Longhorned Beetle Invasion in New England (HERO). Amount – \$329,992. Period – 4/15/12 to 3/31/15 (estimated)

PI – Colin Polsky, Co-PI – John Rogan. National Science Foundation REU Site: Land Change and Vulnerability Studies in New England: The Human-Environmental Regional Observatory (HERO). Amount – \$354,147. Period – 5/1/09 to 4/30/13

Co-P.I. John Rogan - Gordon and Betty Moore Foundation \$989, 934, “Impact of Extreme Weather Events on the Forests of Yucatan” (co-PI with Rutgers University and ECOSUR, Mexico) (2008-2011)

Co-P.I. John Rogan. National Science Foundation REU Program. “Land Change and Vulnerability Assessments in New England: The Human-Environment Regional Observatory (HERO)” (\$354,147) 2009 - 2012

Co-P.I, John Rogan. Henry David Thoreau Foundation “Characterizing Geomorphic Change in Central Massachusetts” \$24,762 (2007-2008)

Co-P.I., John Rogan NASA-LCLUC Program –“Characterizing Fire Activity in the Yucatan Peninsula”. \$200,000 (2006-2008)

Publications

Peer-reviewed articles

Patel, K., J. Rogan, N. Cuba, and A.J. Bebbington (2016). Evaluating conflict surrounding mineral extraction in Ghana: Assessing the spatial interactions of large and small-scale mining. *The Extractive Industries and Society*, in press

Rogan, J., T.M. Wright, J. Cardille, H. Pearsall, Y. Ogneva-Himmelberger, R. Riemann, K. Riitters & K. Partington (2016): Forest fragmentation in Massachusetts, USA: a town-level assessment using Morphological spatial pattern analysis and affinity propagation, *GIScience & Remote Sensing*, DOI: 10.1080/15481603.2016.1141448

Turner, B.L., J. Geoghegan, D. Lawrence, C. Radel, B. Schmook, C. Vance, S. Manson, E. Keys, D. Foster, P. Klepeis, H. Vester, J. Rogan, R. Roy Chowdhury, L. Schneider, R. Dickson, and Y. Ogneva-Himmelberger (2016). *Current Opinion in Environmental Sustainability*, 19, 18-29.

Bebbington, J. Bury, N. Cuba and J. Rogan (2015). Mining, risk and climate resilience in the ‘other’ Pacific: Latin American lessons for the South Pacific. *Asia Pacific Viewpoint*, Vol. 56, No. 2, 189–207. ISSN 1360-7456

Cantor, A., V. DeLauer, D. Martin and J. Rogan (2015) Training interdisciplinary “wicked problem” solvers: applying lessons from HERO in community-based research experiences for undergraduates, *Journal of Geography in Higher Education*, 39:3, 407-419, DOI: 10.1080/03098265.2015.1048508

Christman, Z., J. Rogan, J. R. Eastman and B. L. Turner II (2015). Quantifying uncertainty and confusion in land change analyses: a case study from central Mexico using MODIS data, *GIScience & Remote Sensing*, DOI 10.1080/15481603.2015.1067859

Cunningham, S., J. Rogan, D. Martin, V. DeLauer, S. McCauley and A. Shatz (2015) Mapping land development through periods of economic bubble and bust in Massachusetts using Landsat time series data, *GIScience & Remote Sensing*, 52:4, 397-415, DOI: 10.1080/15481603.2015.1045277

Mardero, S., B. Schmook, C. Radel, Z. Christman, D. Lawrence, M. Millones, E. Nickl, J. Rogan and L. Schneider (2015) Smallholders’ adaptations to droughts and climatic variability in southeastern Mexico, *Environmental Hazards*, 14:4, 271-288, DOI: 10.1080/17477891.2015.1058741

Shatz, A.J., J. Rogan, F. Sangermano, J. Miller and A. Elmes (2015): Modeling the risk of spread and establishment for Asian longhorned beetle (*Anoplophora glabripennis*) in Massachusetts from 2008-2009, Geocarto International, DOI: 10.1080/10106049.2015.1086901

Emel, J., Plisinski, J., and J. Rogan, (2014). Monitoring geomorphic and hydrologic change at mine sites using satellite imagery: The Geita Gold Mine in Tanzania. *Applied Geography*, 54, 243-249.

Bebbington, A., Cuba, N., and Rogan, J., (2014). Visualizing competing claims on resources: approaches from extractive industries research, *Applied Geography*, 52, 55-56.

Cuba N, Bebbington A, Rogan J, and Millones M (2014) Extractive industries, livelihoods and natural resource competition: mapping overlapping claims in Peru and Ghana, *Applied Geography*, 54, 250-261.

Cuba N, Rogan J, Christman Z, Williams CA, Schneider L, Lawrence D (2013) Modelling dry season deciduousness in Mexican Yucatan forest using MODIS EVI data (2000-2011), *GIScience & Remote Sensing*, DOI:10.1080/15481603.2013.778559.

Eastman JR, Sangermano F, EA Machado, Rogan J, and Anyamba A, (2013) Global Trends in Seasonality of Normalized Difference Vegetation Index (NDVI), 1982–2011, *Remote Sensing*, 5(10), 4799-4818

Hostetler A.E, Rogan J, Martin D, DeLauer V and O’Neil-Dunne J, (2013) Characterizing tree canopy loss using multi-source GIS data in Central Massachusetts, USA. *Remote Sensing Letters*, 4 (12), 1137.

Rogan J, Ziemer M, Ratick S, Martin D, Cuba N, and DeLauer V. (2013). The impact of tree cover loss on land surface temperature: A case study of central Massachusetts using Landsat Thematic Mapper Thermal Data. *Applied Geography*, 45 (12), 49.

Rossi E, Rogan J, and Schneider L, (2013) Mapping forest damage in northern Nicaragua after Hurricane Felix using MODIS enhanced vegetation index data *GIScience & Remote Sensing* (50) 4, 67-73.

Schwert B, Rogan J, Giner NM, Ogneva-Himmelberger Y, Blanchard S, and Woodcock C, (2013) A comparison of support vector machines and manual change detection for land-cover map updating in Massachusetts, USA, *Remote Sensing Letters* (4)9, 882-890.

Shatz AJ, Rogan J, Sangermano F, Ogneva-Himmelberger Y, and Chen H, (2013), Characterizing the potential distribution of the invasive Asian longhorned beetle (*Anoplophora glabripennis*) in Worcester County, Massachusetts, *Applied Geography*, 45, 259-268

Vanderhoof ME, Williams C, Ghimire B, Rogan J (2013) Impact of mountain pine beetle outbreaks on forest albedo and radiative forcing as derived from MODIS, Rocky Mountains, USA, *Journal of Geophysical Research – Biogeosciences*, 118: 1-11, doi:10.1002/jgrg.20120.

Zhu, Z., Woodcock, C., Rogan, J., and Kellndorfer, (2012), Assessment of spectral, polarimetric, temporal, and spatial dimensions for urban and peri-urban land cover classification using Landsat and SAR data. *Remote Sensing of Environment*, 117:72-82.

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): 433-442.

- Ghimire, B., J. Rogan, V. F. Rodriguez-Galiano, P. Panday and N. Neeti. 2012. An evaluation of bagging, boosting, and random forests for land-cover classification in Cape Cod, Massachusetts, USA. *GIScience & Remote Sensing* 49 (5): 623-643.
- Taus, A., Ogneva-Himmelberger, Y., and Rogan, J., (2012), Conversion to Organic Farming in the Continental United States: A Geographically Weighted Regression Analysis. *Professional Geographer*
- Brenner, J. C., Z. Christman, and J. Rogan (2012). Segmentation of Landsat Thematic Mapper Imagery Improves Buffelgrass (*Pennisetum ciliare*) Pasture Mapping in the Sonoran Desert of Mexico. *Applied Geography*
- McCauley, S., Rogan, J., and Miller, J. (2012). Modeling Forest Species Distributions in a Human-Dominated Landscape in Northeastern, USA. *International Journal of Applied Geospatial Research*, 4(3), 49-57.
- Christman, Z., and J. Rogan (2012). Error propagation in raster data integration: impacts on landscape composition and configuration. *Photogrammetric Engineering and Remote Sensing* (accepted; in press).
- Mardero, S., E. Nickl, B. Schmook, L. Schneider, J. Rogan, Z. Christman, and D. Lawrence (2012). Sequías en el Sur de la Península de Yucatán: Análisis de la variabilidad anual y estacional de la precipitación. *Investigaciones Geográficas*
- Giner, N.M., Rogan, J., (2012) .A comparison of Landsat ETM+ and High-Resolution Aerial Orthophotos to Map Urban/Suburban Forest Cover in Massachusetts, USA." *Remote Sensing Letters*: 3(8) pp. 667-676.
- Rodriguez-Galiano, V., Ghimere, B., Rogan, J., Chica-Olmo, M., and Rigol-Sanchez, J.P. (2012). An assessment of the effectiveness of a random forest classifier for land-cover classification. *ISPRS Journal of Photogrammetry and Remote Sensing*, 67: 93-104. 3
- Schmook B., Palmer Dickson R., Sangermano F., Vadjunec J.M., Eastman J.R., Rogan J. (2011). A step-wise land-cover classification of the tropical forests of the Southern Yucatán, Mexico. *International Journal of Remote Sensing*. 32(4): 1139-1164.
- Fortier, J., Rogan, J., Woodcock, C., Runfola, D.M., (2011). Utilizing temporally invariant calibration sites to classify multiple dates of satellite imagery. *Photogrammetric Engineering and Remote Sensing*. 77(2), 181-189.
- Griffin, C. G., K. E. Frey, J. Rogan, and R. M. Holmes (2011), Spatial and interannual variability of dissolved organic matter in the Kolyma River, East Siberia, observed using satellite imagery, *J. Geophys. Res.*, 116, G03018, doi:10.1029/2010JG001634.
- Griffin, S., Rogan, J., Runfola, D.M., (2011). Application of Spectral and Environmental Variables to Map the Kissimmee Prairie Ecosystem using Classification Trees. *GIScience & Remote Sensing*: 48(3)
- Stow, D., Petersen, A., Rogan, J., and Franklin, J. 2007. Mapping Burn Severity of Mediterranean-Type Vegetation Using Satellite Multispectral Data. *GIScience and Remote Sensing*, 44 (1): 1-23.
- Treitz, P. and Rogan, J. 2004. Remote sensing for mapping and monitoring land cover and land use change: An introduction. *Progress in Planning* 61 (4): 269-279.
- Rashed, T., Weeks, J.R., Roberts, D., Rogan, J., and Powell, R. 2003. Measuring the physical composition of urban morphology using multiple endmember spectral mixture models. *Photogrammetric Engineering and Remote Sensing*, 69(9), 1011-1020.

Rogan, J., and Chen, D.M. 2004. Remote sensing technology for mapping and monitoring land-cover and land-use change. *Progress in Planning* 61 (4): 301-325.

Rogan, J., Miller, J., Stow, D.A., Franklin, J., Levien, L., and Fischer, C. 2003. Land-Cover Change Monitoring with Classification Trees Using Landsat TM and Ancillary Data. *Photogrammetric Engineering and Remote Sensing*, 69(7), 793-804.

Rogan, J., Franklin, J., and Roberts, D.A. 2002. A comparison of methods for monitoring multitemporal vegetation change using Thematic Mapper imagery. *Remote Sensing of Environment*, 80, 143-156.

Rogan, J. and Franklin, J. 2001. Mapping wildfire burn severity in southern California forests and shrublands using Enhanced Thematic Mapper imagery. *Geocarto International*, 16(4), 89-99.

Rogan, J. and Yool, S.R. 2001. Mapping fire-induced vegetation depletion in the Peloncillo Mountains, Arizona and New Mexico. *International Journal of Remote Sensing*, 22(16), 3101-3121.

Franklin, J., Simons, D.K., Beardsley, D., Rogan, J., and Gordon, H. 2000. Evaluating errors in a digital vegetation map with forest inventory data and accuracy assessment using fuzzy sets. *Transactions in GIS*, 5(4), 285-304.

Book Chapters

Rogan, J., and N. Mietkiewicz (2015). Land cover change (Ch 21). In *Remote Sensing Handbook*, Edited by P. S. Thenkabail. CRC Press, 2200 pp.

Miller, J., and J. Rogan (2007). Using GIS and remote sensing for ecological modeling and monitoring. In *Integration of GIS and Remote Sensing*, V. Mesev, (Ed), Wiley and Sons, 312 pp.

Rogan, J. and J. Miller (2006). GIS data in mapping of forest disturbance and change. In, *Forest Disturbance and Spatial Pattern*. M. Wulder and S. Franklin (Eds), CRC/Lewis, 246 pp.