

STEPHEN L. EGBERT

Position: Associate Professor, Department of Geography, University of Kansas
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Associate Scientist, Kansas Applied Remote Sensing Program
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Education

- Ph.D. University of Kansas, 1994. Geography (Honors)
Dissertation: *The Design and Testing of An Interactive Choropleth Map Exploration System*
- M.A. University of Nebraska, 1983. Geography
Thesis: *The Resettlement of Nance County, Nebraska: Land Alienation Patterns, 1878-1913*
- B.S. Brigham Young University, 1980. Geography (Minor: Asian Studies)
- B.A. University of Minnesota, 1971. Chinese

Academic Experience and Appointments

Associate Professor
Department of Geography, University of Kansas, Fall 2004 – present

Associate Scientist
Kansas Applied Remote Sensing Program, University of Kansas, Fall 2004 – present

Courtesy Associate Professor
Environmental Studies Program, University of Kansas, Spring 2009 – present

Assistant Professor
Department of Geography, University of Kansas, Fall 1998 – Summer 2004

Assistant Scientist
Kansas Applied Remote Sensing Program, University of Kansas, Fall 1998 – Summer 2004

Courtesy Assistant Professor
Department of Geography, University of Kansas, Fall 1996 - Summer 1998

Research Associate
Kansas Applied Remote Sensing Program, University of Kansas, January 1996 – July 1998

Postdoctoral Research Associate and Project Manager
Kansas Applied Remote Sensing Program, University of Kansas: Multi-temporal Land Cover Characterization Project (NASA), January 1994 - August 1995

Other Related Experience

Digital Imagery Consultant - Seventh U.S. Army Training Command Terrain Visualization Center, Technical Services International, Grafenwoehr, Germany, September 1995 - December 1995

Digital Image Processing Consultant - Battlefield Visualization Demonstration, with the Topographic Engineer Center (TEC) and the 649th Topographic Engineer Company - Cubic Applications Corporation, Schwetzingen, Germany - November 1994

Professional Memberships

American Society for Photogrammetry and Remote Sensing (ASPRS), 1981 – present
Association of American Geographers (AAG), 1980 – present
International Network of Genocide Scholars (INOGS), 2009 – present

TEACHING

Courses Taught

GEOG 104	Principles of Physical Geography
GEOG 526	Remote Sensing of Environment I
GEOG 571	Topics in Cultural Geography: Geography of Genocide (with Shannon O’Lear)
GEOG 658	Topics in GIScience: Introduction to GPS in Environmental Applications
GEOG 658	Topics in GIScience: Remote Sensing Applications
GEOG 926	Seminar in Remote Sensing: Electro-Optical Systems; Landscape Visualization
GEOG 980	Geography Seminar: Topics in Remote Sensing Multispectral Sensors and Data Professional Development in Remote Sensing Advanced Data Classification Technologies GeoWall Visual Enhancements for Remotely Sensed Images Time-Series Image Analysis LIDAR Google Earth Applications
GEOG 980	Geography Seminar: Defining Genocide Geographically (with Shannon O’Lear)

Students

Ph.D. Completed

Sunyurp Park – Summer 2003. Dissertation Title: *Determination of Thermal Response of Vegetation to Water-Stress and Its Relationship with NDVI in Western-Central Kansas Using MODIS Data.*

Funded by NASA Earth System Science Fellowship. (Co-advised with Johannes Feddema)

Brian Wardlow. PhD (Honors). Fall 2005. Dissertation Title: *The Development of a Near Real-Time Mapping and Monitoring Protocol for the U.S. Great Plains Agro-Ecosystem Using Time-Series MODIS 250-Meter Data.* Funded by NASA Earth System Science Fellowship.

Iwake Masialeli. Spring 2008. (Co-advise with Garth Myers.)

Yoshinori Nakazawa. Summer 2009. (Co-advise with A. Townsend Peterson.)

Matthew Dunbar. Fall 2009. (Co-advise with JerryDobson)

Ph.D. in Progress

Geoffrey Demarest. 2007 – present.

Lynnette Dornak. 2007 – present. (Co-advise with A. Townsend Peterson)

Eunmok Lee. 2010 – present.

M.A. Completed

Joshua Artman. Completed Fall 2000. (Co-advised with Robert Buddemeier)

Matthew Dunbar. Completed Spring 2005. (Co-advised with Mark Jakubauskas)
Willem Helms. Completed Summer 2003. (Co-advised with Mark Jakubauskas)
Michael Houts. Completed Summer 2000.
Elizabeth Montgomery-Anderson. Completed Fall 2008. (Co-advised with Shannon O’Lear)
Brianna Mosiman. Completed Summer 2003.
Carleen Roberts. Completed Summer 2003.
Peder Sandhei. Completed Summer 2003. (Co-advised with Robert Buddemeier)
Sarah Signiski. Completed Fall 1999. (Co-advised with Kevin Price)
Patrick Taylor. Completed Summer 2004.

M.A. in Progress

Kevin Dobbs. 2006 – present.
Chris Bishop. 2007 – present.
Cara Haas. 2008 – present
Lisa McKinney. 2009 – present.
Nicole Reiz. 2008 – present. (Co-advise with Shannon O’Lear)

Service on Other Graduate Committees and Undergraduate Honors Committees

Ph.D. Dissertation Committees: 18 completed
M.A. Thesis Committee: 10 completed
B.A./B.S. Honors Committee Chair: 3 completed

Short Courses and Workshops

GIS for Tribal Natural Resource Managers. 2007. Presented modules on remote sensing applications and imagery data resources for natural resources specialists from several tribes in the central and western U.S. Haskell Indian Nations University, Lawrence, KS, May 15-17. (With Kevin Dobbs)

GeoWall in Geographic Education. 2007. Presented a half-day workshop on the GeoWall, a system for 3D stereo visualization of the environment. Annual Meeting of the Association of American Geographers, San Francisco, California, April 16. (With Terry Slocum and Matt Dunbar)

Geospatial Technologies for Mine Action Professionals II. 2006. Presented modules on topics in GIS, GPS, and remote sensing for the Geneva International Centre for Humanitarian Demining, Murten, Switzerland, July 18-22. (With Matt Dunbar)

GeoWall in Geographic Education. 2006. Presented a half-day workshop on the GeoWall, a system for 3D stereo visualization of the environment. Annual Meeting of the Association of American Geographers, Chicago, Illinois, March 8. (With Terry Slocum and Matt Dunbar)

Geospatial Technologies for Mine Action Professionals. 2006. Presented modules on remote sensing, GIS, sources of map error, datums, and GPS, and conducted training in ArcGIS using geospatial image sets created at KU for the Geneva International Centre for Humanitarian Demining, Geneva, Switzerland, January 16-19. (With Matt Dunbar)

GIS for Tribal Natural Resource Managers. 2005. Presented modules on remote sensing applications and imagery data resources for natural resources specialists from several tribes in the central and western U.S. Haskell Indian Nations University, Lawrence, KS, November 17. (With Josh Campbell)

GIS for Tribal Natural Resource Managers. 2004. Presented modules on remote sensing applications and imagery data resources for natural resources specialists from several tribes in the central and western U.S. Haskell Indian Nations University, Lawrence, KS, November 30. (With Brianna Mosiman)

- ESIC Science Teachers Workshop. 2004. Presented modules on remote sensing applications and imagery data resources for a nationally selected group of high school and middle school science teachers. University of Kansas, Lawrence, KS, July 15. (With Brianna Mosiman)
- ESIC Science Teachers Workshop. 2003. Presented modules on remote sensing applications and imagery data resources for a nationally selected group of high school and middle school science teachers. University of Kansas, Lawrence, KS, June 19. (With Brianna Mosiman)
- KansasView State and Local Government Remote Sensing Workshop. 2003. For geospatial technical managers in state and local government agencies in Kansas. Kansas Data Access and Support Center, Kansas Geological Survey. Lawrence, Kansas. May 16. (With Theresa J. Crooks, Kenneth Nelson, Brianna N. Mosiman, and Brian D. Wardlow.)
- Geospatial Technologies Workshop. 2002. For faculty of the University of Zambia and geospatial specialists in Zambian government ministries. Held in the School of Mines at the University of Zambia. Lusaka, Zambia, June 3-19. (With Garth A. Myers, Kevin P. Price, Terry A. Slocum, and Brianna N. Mercier)
- Applications of Remote Sensing. 2001. Presented at the NASA/Western Governors' Association Remote Sensing Workshop held in conjunction with the Nebraska GIS Symposium. Lincoln, Nebraska, May 7.
- Remote Sensing Use to Address Regional and Local Issues. 2000. NASA Regional Workshop, Mid-America Focus, State and Local Governments Initiative. Osage Beach, Missouri, May 15.
- Remote Sensing Workshop. 2000. Mid-America GIS Symposium. Osage Beach, Missouri. May 14. A half-day intensive introduction to remote sensing principles and applications for GIS professionals. (With Mark E. Jakubauskas)
- Introduction and Overview of Satellite Imagery for Agricultural Applications. 1999. Presented to management and staff from Strategic Weather, Inc., a partner in Agrimetrix, Inc. Presented characteristics of polar orbiting satellites, including satellite, sensor, and resolution concepts. Lawrence, Kansas, 27 October. (With Kevin P. Price)
- Map Display for Geographic Information Systems. 1991. Geographic Research, Applications, and Information Laboratory (GRAIL), Success with GIS Workshop Series, Department of Geography, University of Kansas. (With Terry A. Slocum)
- The Cartographic/GIS Interface. 1990. Mid-America GIS Symposium, Overland Park, KS. (With Terry A. Slocum)

Teaching Honors

- Kemper Teaching Fellowship, Fall 2005
- Nominated for Byron L. Alexander CLAS Graduate Mentor Award. 2002.

RESEARCH

Research Interests

Most of my earliest research at the Ph.D. level focused on the development and testing of interactive cartographic displays, including both formal and informal analysis of user needs and responses. Subsequently, my focus turned to remote sensing, where I had received extensive training and experience through military service. The broad emphasis of my research currently lies in the application of time-series satellite imagery for land cover mapping, analysis, and modeling. More recently, I have returned to my earlier interest in visualization in cartographic displays. Ongoing and projected research under these and related topics include:

- Development of methods for exploiting information in time-series multi-year composite vegetation index data sets from NASA's MODIS sensor to characterize and map vegetation dynamics on the Great Plains. Initial investigations using the new generation of decision-tree classifiers have produced very promising results in monitoring crop health and progress.
- Evaluation of geotechnologies to assist in creating spatial databases of minefields. Through funding from the Geneva International Centre for Humanitarian Demining, we are investigating the use of a portable tool (handheld PC, GPS, and laser rangefinder binoculars) to map minefields under a variety of environmental and cultural conditions.
- Evaluation of low-cost stereo 3D technology for visualizing geographical datasets, including those created from satellite imagery and digital elevation models. This is a topic that combines my current research interests with the focus of my dissertation research – the visualization of complex spatial data.

In addition to my tradition research concentration in remote sensing, I have recently begun research into the geographic nature of genocide, mass murder, and related crimes against humanity, which has been a long-time personal interest. The motivation for this research is that the geographic component is often understated or even missing from genocide studies, and I believe that geography has much to offer in this regard.

Funding for my research in the geospatial sciences (over \$6,000,000 to date) has come primarily from multi-investigator grants and contracts received from the national and state level. National funding agencies include NASA, NSF, and USGS, while state agencies include the Kansas Department of Wildlife and Parks, the Kansas Department of Agriculture, and the Kansas GIS Policy Board.

Refereed Articles, Book Chapters, and Case Studies – Published or in Press

- Wardlow, B.D. and Egbert, S.L. 2010. A Comparison of MODIS 250-m EVI and NDVI Data for Crop Mapping – A Case Study for Southwest Kansas. *International Journal of Remote Sensing* 31(3):805-830.
- O'Lear, S., Egbert, S.L., and Montgomery-Anderson, E. 2009. *Space and Polity* 13(1):1-8 (introduction to edited special issue).
- Kostelnick, J.C., Dobson, J.E., Egbert, S.L., and Dunbar, M.D. Cartographic Symbols for Humanitarian Demining. *Cartographic Journal* 45(1):18-31
- Wardlow, B.D. and Egbert, S.L. 2008. Large-area crop mapping using time-series MODIS 250 m NDVI data: An assessment for the U.S. Central Great Plains. *Remote Sensing of Environment* 112(2008):1096-1116.
- Park, S., and Egbert, S.L. 2008. Impacts of the U.S. Conservation Reserve Program (CRP) on Landscape Structure in Southwest Kansas, USA. *GIScience & Remote Sensing* 45(1):83-108.

- Wardlow, B.D., Egbert, S.L., and Kastens, J.H. 2007. Analysis of Time-Series MODIS 250m Vegetation Index Data for Crop Classification in the U.S. Central Great Plains. *Remote Sensing of Environment* 108(3):290-310.
- Kostelnick, J.C., Peterson, D.L., Egbert, S.L., McNyset, K.M., and Cully, J.F. 2007. Ecological Niche Modeling of Black-Tailed Prairie Dog Habitats in Kansas Using Geographic Information systems (GIS), Remote Sensing, and the Genetic Algorithm for Rule-Set Prediction (GARP). *Transactions, Kansas Academy of Science* 110(3/4):187-200.
- Slocum, T.A., Dunbar, M., and Egbert, S.L. 2007. Evaluating the Potential of the GeoWall for Geographic Education. *Journal of Geography* 106(3):91-102.
- Anderson, R.P., Peterson, A.T., and Egbert, S.L. Modeling the Spread of a Recently Detected Invasive Species Using Remotely Sensed Data: Purple Loosestrife (*Lythrum salicaria*) in Kansas. *Southwestern Naturalist* 51(4):471-480.
- Wardlow, B.D., Kastens, J.D., and Egbert, S.L. 2006. Using USDA Crop Progress Data and MODIS Time-Series NDVI for Regional-Scale Evaluation of Greenup Onset Date. *Photogrammetric Engineering and Remote Sensing* 72(11):1225-1234.
- Park, S. and Egbert, S.L. Assessment of Soil Erodibility Indices for Conservation Reserve Program (CRP) Lands in Southwestern Kansas Using Satellite Imagery and GIS Techniques. *Environmental Management* 36(6):886-898.
- Park, S. Feddema, J.J., and Egbert, S.L. 2005. MODIS Maximum-Temperature Composite Data and Their Relationships with Climatic Water Budget Factors in the Central Great Plains. *International Journal of Remote Sensing* 26(6):1127-1144.
- Peterson, D.L., Egbert, S.L., Price, K.P., and Martinko, E.A. 2004. Identifying historical and recent land-cover changes in Kansas using post-classification change detection techniques. *Transactions of the Kansas Academy of Science* 107(3/4):105-118.
- Park, S. Feddema, J.J., and Egbert, S.L. 2004. Impacts of Hydrologic Soil Properties on Drought Detection with MODIS Thermal Data. *Remote Sensing of Environment* 89(2004): 53-62.
- Wardlow, B.D. and Egbert, S.L. 2003. A Comparative Analysis of the GAP and NLCD Land Cover Data Sets for Kansas. *Photogrammetric Engineering and Remote Sensing* 69(12): 1387-1397.
- Park, S., Egbert, S.L., Peterson, D., Stewart, A., Lauver, C., Price, K.P., Martinko, E.A., Blodgett, C., Culley, J. Jr., and Kaufman, G. 2003. Kansas Vegetation Mapping Using Multi-Temporal Remote Sensing Data: A Hybrid Approach. *Journal of the Korean Geographical Society* 38(5):667-685. (Korean, with English abstract.)
- Park, S., and Egbert, S.L. 2003. Spatial Analysis of Landscape Structure Changes Caused by the U.S. Conservation Reserve Program in the Central High Plains. *Journal of the Korean Association of Regional Geographers* 9(4):519-533. (Korean, with English abstract.)
- Egbert, S.L., Park, S., Price, K.P., Lee R.Y., Wu, J., and Nellis, M.D. 2002. Using Conservation Reserve Program Maps Derived from Satellite Imagery to Characterize Landscape Structure. *Computers and Electronics in Agriculture* 37(1-3): 141-156.
- Griffith, J.A. and Egbert, S.L. 2001. Remote Sensing Education and Internet/World Wide Web Technology. *Canadian Journal of Remote Sensing* 27(2): 159-168.
- Ortega-Huerta, M.A., Martinez-Meyer, E., Egbert, S.L., and Price, K.P. 2000. Mapping the Land Cover of Mexico Using AVHRR Time-Series Data Sets. *Geocarto International* 15(3): 5-18.
- Peterson, A.T., Egbert, S.L., Sanchez-Cordero, V., and Price, K.P. 2000. Geographic Analysis of Conservation Priority: Endemic Birds and Mammals in Veracruz, Mexico. *Biological Conservation* 93 (2000): 85-94.
- Egbert, S.L., Lee, R.Y, Price, K.P., Nellis, M.D., and Boyce, R. 1998. Mapping Conservation Reserve Program (CRP) Grasslands Using Multi-Seasonal Thematic Mapper Imagery. *Geocarto International* 13(4):17-24.
- Egbert, S.L., Peterson, A.T., Sanchez-Cordero, V., and Price, K.P. 1998. Modeling Conservation Priorities in Veracruz, Mexico. In, Morain, S. (ed.), *GIS Solutions in Natural Resource Management: Balancing the Technical-Political Equation*. High Mountain Press (pp. 55-63).

- Price, K.P., Egbert, S.L., Nellis, M.D., Lee, R.Y., and Boyce, R. 1997. Mapping Land Cover in a High Plains Agro-Ecosystem Using a Multi-Date Landsat Thematic Mapper Modeling Approach. *Transactions, Kansas Academy of Sciences* 100(1-2): 21-33.
- Wu, J., Nellis, M.D., Ransom, M.D., Price, K.P., and Egbert, S.L. 1997. Evaluating Soil Properties of CRP Land Using Remote Sensing and GIS in Finney County, Kansas. *Journal of Soil and Water Conservation* 52/5: 352-358.
- Nellis, M.D., Price, K.P., Egbert, S.L., and Wu, J.P. 1996. Natural Resource Capability of CRP Lands as Grasslands in Southwest Kansas: A Remote Sensing and GIS Perspective. *Geocarto International* 11(3): 23-28.
- Whistler, J.L., Jakubauskas, M.J., Egbert, S.L., Martinko, E.A., Baumgartner, D., and Lee, R.Y. 1996. Development of a Land Use / Land Cover Map. In Morain, S. (ed.) *Raster Imagery in Geographic Information Systems*, Chap. 5, Case Studies (pp. 328-334).
- Egbert, S.L. and Slocum, T.A. 1994. Using C and MetaWINDOW Graphics Primitives to Develop Software for Exploring Spatial Data. Case study in Chapter 6 of MacEachren, A.M. and Taylor, D.R.F. (eds.) *Visualization in Modern Cartography*. New York: Pergamon (pp. 94-96).
- Slocum, T.A. and Egbert, S.L. 1993. Knowledge Acquisition from Choropleth Maps. *Cartography and Geographic Information Systems* 20(2):83-95.
- Egbert, S.L. and Slocum, T.A. 1992. EXPLOREMAP: An Exploration System for Choropleth Maps. *Annals, Association of American Geographers* 82(2):275-288.
- Slocum, T.A. and Egbert, S.L. 1991. Cartographic Data Display. Chapter 9 in Taylor, D.R.F. (ed.) *Geographic Information Systems: The Microcomputer and Modern Cartography*. Oxford: Pergamon (pp. 167-200).
- Baker, W.L., Egbert, S.L., and Frazier, G.F. 1991. A Spatial Model for Studying the Effects of Climatic Change on the Structure of Landscapes Subject to Large Disturbances. *Ecological Modelling* 56/1-4:109-125.
- Slocum, T.A., Robeson, S.H., and Egbert, S.L. 1990. Traditional Versus Sequenced Choropleth Maps: An Experimental Investigation. *Cartographica* 27(1): 67-88.
- Campbell, C.S. and Egbert, S.L. 1990. Animated Cartography: Thirty Years of Scratching the Surface. *Cartographica* 27(2): 24-46.

Refereed Articles in Review

- Bowen, M.W., Johnson, W.C., Egbert, S.L., and Klopfenstein, S.T. New methods for Identifying and Mapping Playa Lakes on the High Plains, Kansas, USA. Submitted to *Wetlands*.
- Dobson, J.E., Egbert, S.L., Dunbar, M.D., and Kostelnick, J.C. Landmines, Minefields, and Mine Actions. Submitted to *Focus on Geography*.

Refereed Articles in Revision or Ready for Submission

None currently

Proceedings and Other Articles

- Peterson, D.L., Whistler, J.L., Bishop, C., Egbert, S.L. and Martinko, E.A. The Kansas Next-Generation Land Use/Land Cover Mapping Initiative. Accepted for publication in *Proceedings of the Annual Conference of the American Society for Photogrammetry and Remote Sensing*. Baltimore, Maryland. March 8-13, 2009.
- Egbert, S.L. and O'Lear, S. 2008. Geographies of Genocide, in *Encyclopedia of Human Geography*, Barney Warf, Ed.

- Kostelnick, J.C., Dobson, J.E., Egbert, S.L., Dunbar, M.D., and Arnold, A. 2006. A Proposed New World Standard for Humanitarian Demining Map Symbols. Proceedings, 26th Annual ESRI International user Conference. San Diego, California, August 7-11.
- Kostelnick, J.C., Dobson, J.E., Egbert, S.L., and Dunbar, M.D. 2005. Cartographic Symbols for Landmine Hazards and Humanitarian Demining. International Cartographic Conference. A Coruña, Spain, July 9-16.
- Wardlow, B.D. and Egbert, S.L. 2005. State-Level Crop Mapping in the U.S. Central Great Plains Agroecosystem using MODIS 250-meter NDVI Data. Pecora 16 "Global Priorities in Land Remote Sensing," Sioux Falls, South Dakota, October 23-27.
- Wardlow, B.D. and Egbert, S.L. 2002. Discriminating Cropping Patterns for the U.S. Central Great Plains Region Using Time-Series MODIS 250-meter NDVI Data – Preliminary Results. *Proceedings, 15th William T. Pecora Memorial Remote Sensing Symposium, Denver, Colorado.* (CD-ROM)
- Egbert, S. L., E. Martinez-Meyer, M. A. Ortega-Huerta, and A. T. Peterson. 2002. Use of Datasets Derived From Time-Series AVHRR Imagery As Surrogates For Land Cover Maps in Predicting Species' Distributions. *Proceedings IEEE 2002 International Geoscience and Remote Sensing Symposium (IGARSS) 4:2337-2339.*
- Park, S., Feddema, J.J., and Egbert, S.L. 2002. MODIS Land Surface Temperatures and Their Relationship with Hydroclimatological Parameters. *Proceedings, Thermosense XXIV.* Orlando, Florida, April 1-5. (CD-ROM)
- Anderson, A.K., and Egbert, S.L. 2002. Hyperspectral Remote Sensing of Hydrocarbon and Brine Seepage in Hutchinson, Kansas. *Proceedings, 2002 ASPRS-ACSM Annual Conference and FIG XXII Congress.* Washington, DC, April 22-26. (CD-ROM)
- Mercier, B.N., Whistler, J.L., Peterson, D.L., Egbert, S.L., Price, K.P., and Martinko, E.A. 2002. Remote Sensing Tools for Statewide Management: Developing a Landsat 7 Imagery Database of Kansas. *Proceedings, 2002 ASPRS-ACSM Annual Conference and FIG XXII Congress.* Washington, DC, April 22-26. (CD-ROM)
- Park, S., Feddema, J.J. and Egbert, S.L. 2002. Evaluation of MODIS Land Surface Temperature Data as a Drought Detection Indicator. *Proceedings, 2002 ASPRS-ACSM Annual Conference and FIG XXII Congress.* Washington, DC, April 22-26. (CD-ROM)
- Egbert, S.L., Park, S., Stewart, A.M., Peterson, D.L., Lauver, C.L., Price, K.P., and Martinko, E.A. 2001. Landscape Structure and the U.S. Conservation Reserve Program on the Central High Plains. *Proceedings, ASPRS 2001: Gateway to the New Millennium.* St. Louis, Missouri, April 23-27. (CD-ROM)
- Wardlow, B.D., and Egbert, S.L. 2001. A Comparison of the GAP and Regional MRLC Land Cover Data Sets for the State of Kansas – Classification Systems, Methods and Results. *Proceedings, ASPRS 2001: Gateway to the New Millennium.* St. Louis, Missouri, April 23-27. (CD-ROM)
- Park, S., Feddema, J., and Egbert, S.L. 2001. An Application of AVHRR Thermal Response Patterns from Land Surfaces to Mapping Drought-Prone Areas in Western-Central Kansas. *Proceedings, ASPRS 2001: Gateway to the New Millennium.* St. Louis, Missouri, April 23-27. (CD-ROM)
- Peterson, D.L., Stewart, A.M., Egbert, S.L., Lauver, C., Martinko, E.A., Price, K.P., Park, S., and Cully, J. 2001. Identifying and Understanding Land Use/Land Cover Changes in Kansas. *Proceedings, ASPRS 2001: Gateway to the New Millennium.* St. Louis, Missouri, April 23-27. (CD-ROM)
- Egbert, S.L., Ortega-Huerta, M., Martinez-Meyer, E., Price, K.P., and Peterson, A.T. 2000. Time-Series Classification of High-Temporal Resolution AVHRR NDVI Imagery of Mexico. *Proceedings, IEEE 2000 International Geoscience and Remote Sensing Symposium.* Vol V: 1978-1980. Honolulu, Hawaii, July 24-28.

- Stewart, A., Peterson, D., Egbert, S., Price, K., Blodgett, C., Park, S., Lauver, C., Martinko, E., and Cully, J. 2000. Land Cover Mapping for GAP: A Hybrid Classification Approach to Identifying the Vegetation of Kansas. *Proceedings, ASPRS 2000, Annual Meeting of the American Society for Photogrammetry and Remote Sensing*. Washington, DC, May 23-26. (CD-ROM)
- Egbert, S., and Mercier, B. 2000. Evaluation of Time-Series Landsat Thematic Mapper Imagery and Derived Spectral Indices for Differentiating Irrigated and Non-Irrigated Cropland in a Semi-Arid Environment. *Proceedings, ASPRS 2000, Annual Meeting of the American Society for Photogrammetry and Remote Sensing*. Washington, DC, May 23-26. (CD-ROM)
- Egbert, S.L., Lee, R.Y., Park, S., Price, K.P., Wu, J., and M.D. Nellis. 2000. Using CRP Maps Derived From Satellite Imagery to Characterize Landscape Structure and Relationships. *Proceedings, Second International Conference on Geospatial Information in Agriculture and Forestry*, Vol. I: 520-527. Lake Buena Vista, Florida, 10-12 January.
- Lomas, J.M., Price, K.P., Martinko, E.A., Egbert, S.L. and D.L. Kastens. 2000. Development of a Value-Added, Remotely Sensed Product for Commercial Distribution. *Proceedings, Second International Conference on Geospatial Information in Agriculture and Forestry*, Vol. II: 140-147. Lake Buena Vista, Florida, 10-12 January.
- Houts, M.E., Lee, R., Price, K.P., Egbert, S.L., and E.A. Martinko. 2000. Using 10-Meter Digital Airborne Imagery to Classify Crop Types in Iowa. *Proceedings, Second International Conference on Geospatial Information in Agriculture and Forestry*, Vol. II: 453-459. Lake Buena Vista, Florida, 10-12 January.
- Bian, L., Sun, H., Blodgett, C.F., Egbert, S.L., Li, W.P., Ran, L.M., and Koussis, A.D. 1996. Integration Architecture and Internal Database for Coupling a Hydrologic Model and Arc/Info. *Proceedings, HydroGIS '96* (IAHS Publication Number 235, pp. 11-17). Vienna, Austria, April 16-19.
- Bian, L., Sun, H., Blodgett, C.F., Egbert, S.L., Li, W.P., Ran, L.M., and Koussis, A.D. 1996. An Integrated Interface System to Couple the SWAT Model and Arc/Info. *Proceedings, Third International Conference / Workshop on Integrating GIS and Environmental Modeling* (www.ncgis.ucsb.edu/conf/SANTA_FE_Cd-ROM/santa_fe.html). Santa Fe, New Mexico, January 20-25.
- Price, K.P., Egbert, S.L., Nellis, M.D., and Lee, R.Y. 1996. Developing a Land Cover Modeling Procedure for the High Plains Using Multi-Temporal Thematic Mapper Imagery. *Proceedings, Canadian Society for Remote Sensing, Annual Meeting*. Vancouver, British Columbia.
- Egbert, S.L., Price, K.P., Nellis, M.D., Lee, R.Y. 1995. Developing a Land Cover Modelling Protocol for the High Plains Using Multi-Seasonal Thematic Mapper Imagery. *Technical Papers, ACSM/ASPRS Annual Convention and Exposition*, Vol 3: 836-845. Charlotte, North Carolina.
- Whistler, J.L., Egbert, S.L., Jakubauskas, M.E., Martinko, E.A., Baumgartner, D.W. and Lee, R.Y. 1995. The Kansas State Land Cover Mapping Project: Regional Scale Land Use/Land Cover Mapping Using Landsat Thematic Mapper Data. *Technical Papers, ACSM/ASPRS Annual Convention and Exposition*, Vol. 3: 773-785. Charlotte, North Carolina.
- Slocum, T.A.; Egbert, S.L.; Prante, M.C.; and Robeson, S.H. 1988. Developing an Information System for Choropleth Maps. *Proceedings, Third International Symposium on Spatial Data Handling*, Sydney, Australia (pp. 293-305).

Abstracts and Conference Presentations (only those not included under Proceedings)

- Kastens, J.H., Dobbs, K.E., Egbert, S.L., Huggins, D.G., Williams, B.S., and Thorp, J.H. 2009. using Digital Elevation Data for River Valley Identification and Floodplain Mapping. First Biennial Symposium of the International Society for River Science. St. Petersburg Beach, FL, July 12-17.
- Dobbs, K., Kastens, J., Egbert, S.L., and Thayne, J. 2009. Real-Time and Forecast Flood Extent Mapping in Eastern Kansas. Accepted as poster presentation for the *Annual Conference of the*

American Society for Photogrammetry and Remote Sensing. Baltimore, Maryland. March 8-13, 2009.

- Egbert, S.L., Wardlow, B.D., and Kastens, J. 2008. Using Dense Time-Series MODIS NDVI Data to Map Crop Types. Presentation to Kansas Biological Survey Seminar, February 29.
- Dobbs, K., Egbert, S. L., and Kastens, J. 2008. The Role of KansasView in Disaster Response and Recovery. The 17th William T. Pecora Memorial Remote Sensing Symposium. Denver, Colorado, Nov. 16-20.
- Dobbs, K.E., Campbell, J., and Egbert, S.L. 2006. KansasView: Remote Sensing Lesson Packs for K-12 Education. Annual Conference, Kansas Association for Conservation and Environmental Education. Pittsburg, Kansas, November 3.
- Wardlow, B.D. and Egbert, S.L. 2006. An Evaluation of Multi-temporal MODIS 250-Meter Vegetation index Data for Crop Mapping in the U.S. Central Great Plains. Global Vegetation Workshop, 2006. Missoula, Montana, August 7-10.
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Abstracts Submitted and in Review

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Other Publications: Technical Reports, Highlight Articles, Bulletins, and Maps

- Egbert, S.L., Dunbar, M.D., Dobson, J.E., and Kostelnick, J.C. *Evaluation of the EOD IS-Survey Handheld Tool for Technical Surveys: Final Report*. Submitted to the Geneva International Centre for Humanitarian Demining. (Submitted April 2006.) 57 pp.
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Research Grants and Contracts (Investigator or Co-Investigator)

Summary of Grant Activity

Grants			Contracts		
Funded	26	\$5,243,862	Funded	18	\$1,596,561
Pending	1	\$147,759	Pending	0	---

Funding agencies:

Geneva International Centre for Humanitarian Demining
 National Science Foundation
 National Aeronautics and Space Administration (NASA)
 Department of Defense
 U.S. Geological Survey
 National Park Service
 Kansas Department of Agriculture, Division of Water Resources
 Kansas GIS Policy Board
 University of Kansas

Grants

Funded Grant Proposals

- Egbert, S.L., Nelson, K., and Whistler, J.L. 2009-2010. StateView Program Development and Operations for the State of Kansas. AmericaView Inc. (through funding from U.S. Geological Survey). 09/30/09 – 09/29/10. \$23,100.
- Dobson, J.E., and Egbert, S.L. 2009. Bowman Expedition: Study of Transportation in Kazakhstan. Radiance Technologies, Inc. 01/01/09-09/24/09. \$115,411.
- Egbert, S.L., Nelson, K., and Whistler, J.L. 2008-2009. StateView Program Development and Operations for the State of Kansas. AmericaView Inc. (through funding from U.S. Geological Survey). 09/30/09 – 09/29/09. \$23,989.
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- Egbert, S.L., Crooks, T.J., Warner, B., Nelson, K., Whistler, J.L., and Peterson, D.L. 2002-2003. KansasView: Advancing the Use of Remote Sensing Data and Technology in Kansas through Geospatial Archive Enhancement, Consortium Expansion, Cooperative Demonstration Projects, and Outreach and Workshops. USGS. 09/01/02-08/31/03. \$169,983.
- Egbert, S.L. 2002-2003. Using Multi-Date Satellite Imagery and Geospatial Techniques to Characterize the Miombo Woodlands of Chongwe, Zambia. General Research Fund, University of Kansas. 7/1/98-6/30/00. \$5,398.
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- Price, K.P., Martinko, E.A., Egbert, S.L., and deNoyelles, F.J. 2001-2002. Incubating Commercial Remote Sensing Products. NASA. 07/15/00-01/14/02. \$100,000.
- Egbert, S.L. 1998-2000. Using Time-Series Thematic Mapper Imagery to Identify, Characterize, and Monitor Irrigated Agriculture on the Great Plains. New Faculty General Research Program, University of Kansas. 7/1/98-6/30/00. \$5,398.
- Martinko, E.A., Price, K.P., Egbert, S.L., Whistler, J.L., Stiles, J.M., and Jakubauskas, M.E. 1998-2001. The Great Plains Regional Earth Science Applications Center (GP-RESAC): A Consortium to Transfer Remote Sensing Products and Technology to Support the Great Plains Agroecosystem. NASA Earth Science Enterprise. 10/01/98-12/31/02. \$1,550,000.
- Peterson, A.T., Price, K.P., Egbert, S.L., Sanchez-Cordero, V., Soberón-Mainero, J., and Buddemeier, R.W. 1997-2000. Biodiversity Consequences of Global Climate Change in Mexico. National Science Foundation. 10/1/97-9/30/00. \$350,000.
- Price, K.P., Martinko, E.A., Egbert, S.L., and deNoyelles, F.J. 1998-1999. Research in the Incubation of Commercial Remote Sensing Products. NASA Mission to Planet Earth. 7/01/98-6/30/99. \$150,000.
- Price, K.P., Egbert, S.L., Whistler, J.L., Martinko, E.A., deNoyelles, F.J., and McColl, R.W. 1997-1998. An Interdisciplinary Center of Excellence in Environmental Remote Sensing at the University of Kansas. NASA 97-MTPE-05 (10/1/97 - 9/30/98). \$362,676.
- Price, K.P., Martinko, E.A., Egbert, S.L., and deNoyelles, F.J. 1997-1998. Research in the Incubation of Commercial Remote Sensing Products. NASA Mission to Planet Earth. 5/1/97-4/30/98. \$140,431.
- Price, K.P., Martinko, E.A., Egbert, S.L., and deNoyelles, F.J. 1996 – 1997. Development of a Land Use Mapping and Monitoring Protocol for the Great Plains Region: A Multitemporal Remote Sensing Application. NASA Mission to Planet Earth. \$149,431.

Grant Proposals Pending

Slocum, T.A. and Egbert, S.L. 2010-2012. Evaluating the Effect of Large-Format Stereoscopic Displays on Student Learning in Introductory College Physical Geography Classes. Submitted to National Science Foundation (Geoscience Education). 09/01/10 – 08/31/12. \$147,759.

Contracts

Contracts Funded

- Egbert, S.L. 2008. Mapping Potential Inundation Extents Along Kansas Waterways for Emergency Planning and Response. Kansas GIS Policy Board. 07/01/08-06/30/09. \$73,095.
- Martinko, E.A., Jakubauskas, M., Whistler, J.L., and Egbert, S.L. 2008. Next-Generation Land Use-Land Cover Mapping (Year 3). Kansas GIS Policy Board. 07/01/08-06/30/09. \$96,982.
- Egbert, S.L. 2008. Mapping Potential Inundation Extent Along Kansas Waterways. Kansas GIS Policy Board. 01/11/08-11/15/08. \$19,746.
- Dobson, J.E. and Egbert, S.L. 2008. Contract for Professional Services Between the Geneva International Centre for Humanitarian Demining and The University of Kansas. 01/01/08-12/31/08. \$100,000.
- Johnson, W.C., and Egbert, S.L. 2007-2008. Database Development: Playa Basin Occurrence on the High Plains of Kansas. 07/01/07-06/30/08. \$33,904.
- Dobson, J.E. and Egbert, S.L. 2007. Contract for Professional Services Between the Geneva International Centre for Humanitarian Demining and The University of Kansas. 01/01/08-12/31/08. \$150,000.
- Dobson, J.E. and Egbert, S.L. 2006. Contract for Professional Services Between the Geneva International Centre for Humanitarian Demining and The University of Kansas. 01/01/06-12/31/06. \$150,000.
- Dobson, J.E. and Egbert, S.L. 2005. Contract for Professional Services Between the Geneva International Centre for Humanitarian Demining and The University of Kansas. 01/01/05-12/31/05. \$100,000.
- Dobson, J.E. and Egbert, S.L. 2004. Contract for Professional Services Between the Geneva International Centre for Humanitarian Demining and The University of Kansas, Annex II: Field Data Collection Equipment and Procedures. 1/15/04-12/01/04. \$100,000.
- Whistler, J.L., Egbert, S.L., Mosiman, B.N., and Martinko, E.A. . 20054-2005. Kansas Satellite Image Database. Kansas GIS Policy Board. 12/1/04 – 12/15/05. \$59,400.
- Peterson, D.L., Whistler, J.L., Martinko, E.A., Crooks, T.J., Egbert, S.L., and Price, K.P. 2003-2004. Kansas Satellite Imagery Database (KSID). Kansas GIS Policy Board. \$38,002.
- Egbert, S.L., and Whistler, J.L. 2002-2003. An Inventory of Dams for the State of Kansas Using Remotely Sensing Satellite Imagery. Kansas Department of Agriculture, Division of Water Resources. 07/01/02 – 06/30/03. \$57,247.
- Whistler, J.L., Stewart, A.M., Peterson, D., Egbert, S.L., and Martinko, E.A. 2001-2002. Landsat 7 Satellite Imagery Database. Kansas GIS Policy Board. 07/01/01 - 06/30/02. \$59,850.
- Egbert, S.L., Martinko, E.A., and Price, K.P. 2000-2001. Applying Enhanced Techniques to Map Irrigated Agriculture Using Multidate Landsat Thematic Mapper Image Classification. Kansas Department of Agriculture. 05/15/00 - 04/15/01. \$24,507.
- Price, K.P., Martinko, E.A., and Egbert, S.L. 1999-2000. Kansas Land Cover GIS Database Update. Kansas Water Office. 12/31/99-12/31/00. \$64,210.
- Price, K.P., Martinko, E.A., and Egbert, S.L. 1998-1999. Kansas Land Cover GIS Database Update. Kansas Water Office. 7/1/98-12/31/99. \$57,854.

Egbert, S.L., and Lauver, C.L. 1998-1999. Digital Interpretation and Classification of Vegetation Associations, Tallgrass Prairie National Preserve. National Park Service. 7/30/98-6/30/99. \$10,000.

Martinko, E.A., Price, K.P., Egbert, S.L., and Whistler, J.L. 1997-1998. Mapping Agriculture on the Great Plains Using Multidate Landsat Thematic Mapper Image Classification. Kansas Department of Agriculture, Division of Water Resources. 12/1/96-2/28/98. \$251,764.

ACADEMIC SERVICE

Department, College, and University

Chair, Geography Graduate Studies Committee, 2006 – present
Chair, Geography Department Colloquium Series Committee, 2003 – 2006
GIS Steering Committee, University of Kansas, 2003 – present
Department Ambassador to Center for Teaching Excellence, 2002 – 2005
Faculty Adviser, Mt. Oread Geospatial Technologies Club, 2002 – present
Faculty Committee, Department of Geography, University of Kansas, 2001 – 2003
Systems Analysis and Design Program Committee, College of Liberal Arts and Sciences, University of Kansas, 2001 - 2003
Review Committee, Kansas Biological Survey Director, University of Kansas, 2000 – 2001
Student Affairs Committee, Department of Geography, University of Kansas, 1999 – 2001
Faculty Adviser, Latter-day Saint Student Association (LDSSA), 1999 – 2006
Chair, Curriculum and Academic Programs Committee, Department of Geography, University of Kansas, 1998 - 1999
Project Lead, Land Cover Mapping, GP-RESAC, KARS, December 1998 – 2003
Search Committee, Cartographic Services Director, Geography, Summer 1998
Chair, GP-RESAC Proposal Development Committee, KARS, Summer 1998
Chair, Search Committee, GP-RESAC Coordinator, KARS, December 1998 – March 1999
Publication Committee, Kansas Land Cover Map and KARS Program Brochure, KARS, 1997

State, National, International

State Director, KansasView Program. Coordinate activities with other consortium members (universities and colleges, plus state and local government agencies), especially through meetings of the state GIS Policy Board.

Geneva International Centre for Humanitarian Demining. A significant portion of our relationship with GICHD focuses on service functions. In our capacity as field evaluators for the handheld field survey tool, I have conducted site visits to Chile, Albania, Ecuador, and Lebanon, and have conducted geospatial workshops at GICHD headquarters in Switzerland for key personnel.

Professional Societies

Session Chair, Annual Meeting, Association of American Geographers, San Francisco, California, 2007
Session Chair, Annual Meeting, American Society for Photogrammetry and Remote Sensing, Washington, DC, 2000
Session Chair, Annual Meeting, Association of American Geographers, Honolulu, Hawaii, 1999
Session Chair, Annual Meeting, Great Plains – Rocky Mountain Division, Association of American Geographers, Colorado Springs, Colorado, 1999
Session Chair, Annual Meeting, Kansas Academy of Science, Manhattan, Kansas, 1999

Reviewer for Grant Proposals and Professional Journals

NSF, 2003
NASA, 1996, 2000
Annals, Association of American Geographers, 2007

Emporia State Research Journal, 2007
Environmental Protection Agency, 2000
Geoscience Letters, 2007
Great Plains Research, 2002
International Journal of Remote Sensing, 1998, 2003
Landscape Ecology, 2001
Photogrammetric Engineering and Remote Sensing, 1993, 1998, 2002, 2004, 2006, 2007
Cartography and Geographic Information Systems, 1992, 2000, 2001
Geocarto International, 1996, 1997, 2000
Transactions, Kansas Academy of Science, 2008

Book and Software Reviews

Egbert, S.L. (1993). MapInfo for Windows 2.0, in *Cartography and Geographic Information Systems* 21/1: 50-52.
Egbert, S.L. 1990. Mosher, Steven W., Journey to the Forbidden China (1985, New York: The Free Press), in *Focus* 40/4: 31.