

# DANA L. PETERSON

**Kansas Biological Survey**  
**Kansas Applied Remote Sensing**  
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## EDUCATION

**Master of Arts**, University of Kansas, 1999  
Geography, concentrations in remote sensing and geographic information systems techniques and physical geography; 3.95 GPA

**Bachelor of General Studies**, University of Kansas, 1996  
Environmental Studies with an emphasis in environmental planning and policy, minor in geography; 3.63 GPA

Johnson County Community College; 3.66 GPA  
Kansas City Kansas Community College; 3.00 GPA

## WORK EXPERIENCE

1999-Present

**Research Assistant**, Kansas Applied Remote Sensing, Lawrence, Kansas

- Manage daily operations of funded research projects.
- Conduct research and analyze data on research projects.
- Coordinate project goals and timelines.
- Present research findings at local, regional, national and international conferences.
- Publish research findings in peer-reviewed journals.

1997-1999

**Graduate Research Assistant**, Kansas Applied Remote Sensing, Lawrence, Kansas

- Generated, managed, and analyzed digital data.
- Generated and managed models to calculate statistics and vegetation metrics using digital data.
- Prepared progress reports and metadata files.
- Conducted quality assessments on processed data.

1997-1997

**Student Research Assistant**, Kansas Applied Remote Sensing, Lawrence, Kansas

- Analyzed satellite imagery for system noise and cloud cover.
- Archived satellite data files.
- Supervised and collected field vegetation data for a funded research project.
- Performed image processing on multitemporal, multi-spectral satellite images for land cover analysis.

## COMPUTER SKILLS

**Software:** ArcGIS, ArcView, Erdas Imagine, ENVI, Access, SPSS, Excel, Quattro Pro, Word, Wordperfect, Freehand, and Photoshop

**Operating Systems:** Unix, MS-DOS, Windows 95, and Windows NT

**Hardware:** SUN Workstation, IBM Compatible Personal Computer, Scanner, Plotter, Digitizing Tablet, 9-Track Tape Drive, GPS unit, Spectroradiometer, and Sunfleck Ceptometer

## RELEVANT COURSEWORK

Geographic Information Systems  
Visualizing Spatial Data  
Analyzing Geographic Data  
Plant Geography  
Field Ecology  
Indicators of Ecological Change  
Environmental Engineering

Remote Sensing  
Multivariate Analysis  
Technical Writing  
Principles of Ecology  
Field Techniques for Remote Sensing  
Environmental Geology  
Environmental Planning

## AFFILIATIONS & MEMBERSHIPS

Tiny-k Early Intervention of Douglas County: Co-chair  
Lawrence Community Nursery School Coop

## GRANTS AWARDED

**Peterson, D.**, J. Whistler, E. Martinko, T. Crooks, S. Egbert, K. Price. Kansas Satellite Image Database (KSID). Kansas GIS Policy Board, \$60,442 Awarded (7/1/03 – 6/30/04).

Egbert, S. L., T. J. Crooks, J. L. Whistler, **D. L. Peterson**, K. A. Nelson, B. F. Warner. 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, \$169,983 (September 1, 2002-August 31, 2003).

Martinko, E. A., K. P. Price, J. Whistler, **D. L. Peterson**, A. M. Stewart. Landsat 7 Satellite Imagery Database Development, Kansas GIS Policy Board, \$57,000 (July 1 2001-June 30, 2002).

## REFEREED PUBLICATIONS

Kostelnick, J. C., **D. L. Peterson**, S. L. Egbert, K. M. McNyset, and J. F. Cully. 2007. Ecological

niche modeling of Black-tailed prairie dog habitats in Kansas, *Kansas Academy of Science*, 110(3): 187-200.

**Peterson, D.**, S. Egbert, K. Price, E. Martinko. 2004. Identifying historical and recent land-cover changes in Kansas using post-classification change detection techniques, *Transactions of the Kansas Academy of Sciences*, 107(3/4): 105-118.

S. Park, S. Egbert, **D. Peterson**, A. Stewart, C. Lauver, K. Price, C. Blodgett, J. Cully, and G. Kaufman. 2003. Kansas vegetation mapping using multi-temporal remote sensing data: A

- hybrid approach, *Journal of the Korean Geographical Society*, 38(5): 667-685.
- D. L. Peterson**, S.L. Egbert, K.P. Price, E.A. Martinko. 2004. Identifying historical and recent land-cover changes in Kansas using post-classification change detection techniques, *Transactions of the Kansas Academy of Sciences*, *In press*.
- Jakubauskas, M. J., **D. L. Peterson**, J. H. Kastens, D. R. Legates. 2002. Time series remote sensing of landscape-vegetation interactions in the Southern Great Plains, *Photogrammetric Engineering and Remote Sensing*, 68(10):1021-1030.
- Peterson, D. L.**, K. P. Price, and E. A. Martinko. 2002. Discriminating between native warm season and non-native cool season grasslands in northeastern Kansas. *International Journal of Remote Sensing*, 23(23): 5015-5030.
- Peterson, D. L.**, K. P. Price, and E. A. Martinko. 2002 Investigating grazing intensity and range condition gradients in grasslands using multitemporal Landsat Thematic Mapper data. *GeoCarto International*, 17(4): 13-24.
- Peterson, D.**, S. Egbert, K. Price, and E. Martinko. 2003. Identifying Historical And Recent Land Cover Changes In Kansas Using Post- Classification Change Detection Techniques, *Transactions of the Kansas Academy of Science*, Accepted 10/2003.

#### CONFERENCE PUBLICATIONS

- Mercier, B.N., J.L. Whistler, **D.L. Peterson**, S.L. Egbert, K.P. Price, and E.A. Martinko. 2002. Remote Sensing Tools for Statewide Management: Developing the First Landsat Imagery Database of Kansas. 2002 ASPRS-ACSM Annual Conference and FIX XXII Congress. Washington, DC, April 22-26.
- Jakubauskas, M. E., **D. L. Peterson**, S. W. Campbell, S. D. Campbell, D. Penny, and F. deNoyelles. 2002. Mapping and monitoring invasive aquatic plant obstructions in navigable waterways using satellite multispectral imagery. *Proceedings of the 15<sup>th</sup> William T. Pecora Memorial Remote Sensing Symposium*, 8-15 November, Denver, Colorado.
- Jakubauskas, M. E., **D. Peterson**, S. W. Campbell, S. D. Campbell, D. Penny, and F. deNoyelles. 2002. Remote sensing of invasive aquatic plant obstruction in navigable waterways. *2002 ASPRS\_ACSM Annual Conference*, April 22\_26, 2002.
- Peterson, D.L.**, M. E. Jakubauskas, K. Kindscher, D. Debinski. 2001. Hyperspectral remote sensing of nonforested montane vegetation communities. *Third International Conference on Geospatial Information in Agriculture and Forestry*, 5-7 November, Denver, Colorado.
- Jakubauskas, M. E., **D. L. Peterson**, D. R. Legates. 2001. Fourier decomposition of an AVHRR NDVI time series for seasonal and interannual land cover change detection. *First International Workshop on the Analysis of Multitemporal Remote Sensing Images*, 13-14 September, University of Trento, Trento, Italy.
- Peterson, D.L.**, S.L. Egbert, C.L. Lauver, A.M. Stewart, E.A. Martinko, K.P. Price, S. Park, and J.F. Cully. 2001. Identifying and understanding land use/land cover changes in Kansas. In: *ASPRS Technical Papers, 2001 Annual Conference, ASPRS*, 23-27 April, St. Louis, MO.
- Egbert, Stephen L, S. Park, **D.L. Peterson**, A.M. Stewart, C.L. Lauver, K.P. Price, E.A. Martinko. 2001. Landscape structure and the U.S. Conservation Reserve Program on the Central High Plains. In: *ASPRS Technical Papers, 2001 Annual Conference, ASPRS*, 23-27 April, St. Louis, MO.
- Peterson, D. L.**, M. E. Jakubauskas, and D. R. Legates. 2000. Time series remote sensing of

- landscape variability in the southern Great Plains indicator region. 2000 *Annual Conference, ASPRS*, 24-26 May, Washington, D.C.
- Stewart, A. M., Egbert, S. L., Lauver, C. L., Martinko, E. A., Price, K. P., **Peterson, D.**, Park, S., Blodgett, C. F., and Cully, J. 2000. Landcover Mapping for GAP: A Hybrid Classification Approach to identifying the Vegetation of Kansas. In: *ASPRS Technical Papers, 2000 Annual Conference, ASPRS*, 24-26 May, Washington, D.C.
- Peterson, D. L.**, K. P. Price, and E. A. Martinko. 2000. Investigating grazing intensity and Range condition gradients in native warm season and non-native cool season grasslands using multitemporal Landsat Thematic Mapper data. *Proceedings, The Second International Conference on Geospatial Information in Agriculture and Forestry*, 10-12 January, Lake Buena Vista, Florida.
- Peterson, D. L.**, K. P. Price, and E. A. Martinko. 1999. Discriminating between native warm season and non-native cool season grazed grasslands in Douglas County, Kansas using multitemporal Landsat Thematic Mapper data. *Proceedings, PECORA 14 Symposium and Land Satellite Information in the Next Decade III Conference*, 6-10 December, Denver, Colorado.

#### **PUBLISHED ABSTRACTS**

- Kostelnick, J. C., **D. L. Peterson**, S. L. Egbert, K. M. McNyset, and J. F. Cully. 2004. Modeling Black-tailed prairie dog habitats in Kansas with the genetic algorithm for rule-set prediction (GARP). *MidAmerica GIS Symposium 2004*, 20-22 April, Kansas City, MO.
- Mennard, S., K. Kindscher, and **D. Peterson**. 2003. Ecological systems as land cover map units for the GAP analysis program in Kansas. *Society of Conservation Biology Annual Meeting*, 28 June – 2 July, Duluth, Minnesota.
- Jakubauskas, M.E., **D. L. Peterson**, S. W. Campbell, S. D. Campbell, D. Penny. 2002. Invasive aquatic plant mapping using airborne and satellite remotely sensed imagery: An evaluation and comparison of methods. *The Aquatic Plant Management Society, Inc. 42<sup>nd</sup> Annual Meeting*, 21-24 July, Keystone, Colorado.
- Lauver, Chris L., **Dana Peterson**, Aimee Stewart, Stephen Egbert, Edward Martinko, and Kevin Price. 2002. The challenge of mapping grasslands: Assessing the accuracy of the Kansas GAP analysis land cover map. *Society for Range Management Annual Meetings*, 15-19 February, Kansas City, Missouri.
- Peterson, D.L.**, S.L. Egbert, C.L. Lauver, A.M. Stewart, E.A. Martinko, K.P. Price, S. Park. 2001. Detecting land use/land cover change in Kansas using the post classification change detection technique. *Kansas Academy of Sciences Annual Meetings*, Lawrence, 6-7 April, Kansas.
- Egbert, Stephen L, S. Park, **D.L. Peterson**, A.M. Stewart, K.P. Price. 2001. Effects of the U.S. Conservation Reserve Program on landscape structure in southwest Kansas. *Kansas Academy of Sciences Annual Meetings*, 6-7 April, Lawrence, Kansas.
- Lauver, C., A. Stewart, S. Egbert, E. Martinko, K. Price, **D. Peterson**, S. Park, C. Blodgett, and J. Cully. 2000. How much tallgrass prairie is actually left? - Analysis of current and historical land cover in Kansas. *10<sup>th</sup> Annual National Gap Analysis Program Meeting*, 13-17 August, San Antonio, TX.
- Stewart, A. M., S. L. Egbert, C.L. Lauver, E. A. Martinko, K. P. Price, **D.L. Peterson**, S. Park, C. F. Blodgett, and J.F. Cully. 2000. Gap land cover mapping: a hybrid classification approach in Kansas. *ERDAS User Conference 2000*, 22-23 May, Washington, D.C.
- Stewart, A. M., S. L. Egbert, C. L. Lauver, E. A. Martinko, K.P. Price, **D.L. Peterson**, S. Park,

- C. F. Blodgett, and J.F. Cully. 2000. Gap land cover mapping in Kansas. *MidAmerica GIS Symposium 2000*, 16-18 May, Osage Beach, MO.
- Peterson, D. L.**, S. L. Egbert, A. Stewart, C. Lauver, E. A. Martinko, K. P. Price, S. Park, C. Blodgett, and J. Cully. 2000. Mapping vegetation for Kansas GAP using a hybrid classification approach. *Kansas Academy of Sciences Annual Meetings*, March 31-April 1, Hutchinson, Kansas.
- Peterson, D. L.**, K. P. Price, and E. A. Martinko. 1998. The effects of grazing on the spectral characteristics of warm and cool season grasslands in Douglas County, Kansas, presented at the *Great Plains/Rocky Mountain Division of the Association of American Geographers*, 24-26 September, Lawrence, Kansas.
- Griffith, J. A. , E. A. Martinko, J. L. Whistler, F. J. DeNoyelles, and **D. L. Peterson**. 1998. Linking fisheries health and stream condition in the Great Plains with landscape pattern and vegetation indices: An assessment framework, *Great Plains/Rocky Mountain Division of the Association of American Geographers*, 24-26 September, Lawrence, Kansas.

## OTHER PUBLICATIONS

- Martinko, E., J. Whistler, **D. Peterson**, J. Kastens, R. Hagen, D. Huggins, M. Jakubauskas. 2007. A Watershed Classification System for Tiered Diagnosis of Biological Impairments: A Scalable, Central Plains Focus with National Applicability. Final Report to the U.S. Environmental Protection Agency STAR Program, Cooperative Agreement RD-83059701. *KBS Report 141. Kansas Biological Survey*, University of Kansas Lawrence, 153 pp.
- Jakubauskas, M., **Peterson, D.**, Campbell, S.W., Campbell, S.D., Penny, D., and deNoyelles, F. 2003. Remote Sensing of Invasive Aquatic Plant Obstruction in Navigable Waterways. Final report to US Department of Transportation Research and Special Programs Administration, DOT/NASA Commercial Remote Sensing and Geospatial Technology Applications to Transportation. 30 pp + appendices.
- Peterson, D. L.**, J. L. Whistler and B. N. Mosiman, 2004. The Kansas Satellite Image Database 2002-2003: Final Report. *Kansas Biological Survey Report # 121* Lawrence, Kansas.
- Peterson, D.**, Egbert, S., Lauver, C., Price, K., and E. Martinko,. 2002. *Kansas Vegetation Map* (Hard Copy). Kansas Biological Survey, Lawrence, Kansas.
- Menard, S., K. Kindscher, and **D. Peterson**. 2002. Using Ecological Systems as Land Cover Map  
Units for the GAP Analysis Program in Kansas: Summary Report to USGS-BRD Gap Analysis Program. NatureServe, Minneapolis, MN and Kansas Biological Survey, Lawrence, KS. Unpublished report. 63 pp.
- Whistler, J.L., **D.L. Peterson**, B.N. Mercier. 2002. The Kansas Satellite Image Database: 2000-2001 Thematic Mapper Imagery, Kansas Biological Survey, Lawrence, Kansas.
- Peterson, D.L.**, Stewart, A.M., Blodgett, C.F., Egbert, S.L., Lauver, C.L., Price, K.P., and Martinko, E.A. 2002. Kansas Vegetation Map. Kansas Biological Survey, Lawrence, Kansas.
- Jakubauskas, M. E., **D. L. Peterson**, D. R. Legates. 2001. Interaction between land cover/land use dynamics and climatological variability in the Western Oklahoma/Kansas/Texas indicator region, Final report to the National Institute for Global Environmental Change, SouthCentral Regional Center, Tulane University, New Orleans, LA. 6 pp.
- Lauver, C.L., J. Delisle, **D.L. Peterson**. 2001. GIS database development of a ground-based

- statewide vegetation survey. *Kansas Biological Survey Report #100*, University of Kansas, Lawrence, Kansas.
- Egbert, S.L., **D.L. Peterson**, A.M. Stewart, C.L. Lauver, C.F. Blodgett, K.P. Price, and E.A. Martinko. 2001. The Kansas GAP land cover map final report. *Kansas Biological Survey Report #99*, University of Kansas, Lawrence, Kansas.
- Martinko, E.A., J.L. Whistler, F. deNoyelles, J.A. Griffith, **D. Peterson**. 2000. Landscape analysis and characterization to support regional environmental assessment (LACRA). Final Project Report submitted to the EPA.
- Peterson, D. L.** 1999. *Spectral characteristics of grazed native warm season and non-native cool season grasslands in Douglas County, Kansas*. University of Kansas, M. A. Thesis.