

## CURRICULUM VITAE

BRADLEY C. RUNDQUIST

### GENERAL INFORMATION

#### CONTACT

Department of Geography  
221 Centennial Drive, Stop 9020  
University of North Dakota  
Grand Forks, ND 58202-9020  
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#### EDUCATION

**Ph.D. Geography**, Kansas State University, Manhattan. 2000. Dissertation title: Fine-scale spatial and temporal variation in the relationship between spectral reflectance and a prairie vegetation canopy. Advisor: D.G. Goodin

**M.A. Geography**, Kansas State University, Manhattan. 1995. Thesis title: A reflection of its water: Agricultural land-use change in Finney County, Kansas, 1987-1992. Advisor: M.D. Nellis

**B.J. News-Editorial**, University of Nebraska, Lincoln. 1991. Completed minors in geography, biology, and Latin

#### APPOINTMENTS

2008-Present **Chair**, Department of Geography, UND  
2005-Present **Adjunct Associate Professor**, Department of Space Studies, UND  
2004-Present **Associate Professor**, Department of Geography, UND  
**Adjunct Associate Professor**, Department of Earth System Science & Policy  
**Director**, North Dakota View (AmericaView Consortium)  
2002-2008 **Director**, Geographic Information Science Graduate Certificate, UND  
2000-Present **Director**, Geographic Analysis and Remote Sensing Laboratory, UND  
2000-2004 **Assistant Professor**, Department of Geography, UND  
1998-2000 **Adjunct Instructor**, College of Technology and Aviation, Kansas State University at Salina  
1997-2000 **Graduate Research Assistant**, Department of Geography, Kansas State University, Manhattan  
1997-2000 **Manager**, Remote Sensing Research Laboratory, Department of Geography, Kansas State University, Manhattan  
1995-1996 **Associate Scientist**, Lockheed Martin Engineering & Sciences Company, NASA Johnson Space Center, Houston, TX  
1993-1995 **Graduate Teaching Assistant**, Department of Geography, Kansas State University, Manhattan  
1991-1992 **Assistant City Editor**, *The Messenger* (Daily Newspaper) Fort Dodge, IA

## TEACHING

### TEACHING INTERESTS

- Remote Sensing and Digital Image Processing
- Geographic Information Systems
- Biogeography
- Introductory Physical Geography

### COURSES TAUGHT

- Global Physical Environment (GEOG 121 at UND)
- Environmental Remote Sensing and Air Photo Interpretation & Lab (GEOG 374/L at UND)
- Biogeography (GEOG 421 at UND)
- Introduction to Geographic Information Systems (GEOG 474 at UND)
- Digital Image Processing (GEOG 475 at UND)
- Advanced Techniques in Geographic Information Systems (GEOG 574 at UND)
- Graduate Seminar in Remote Sensing (GEOG 575 at UND)
- Field Methods in Geography (GEOG 421/576 at UND)

### GRADUATE RESEARCH ADVISED AT UND

#### • **Completed (14 M.S. Theses, 1 M.A. Thesis, 3 M.S. Independent Studies)**

- 2010 Benjamin L. Prusa, M.S. "Characteristics of Search and Rescue at Mount Rainier National Park." Thesis Committee Co-Chair (with T. Heggie). (Technician, Titan Machinery, Marshall, MN).
- 2009 Justin D. Braaten, M.S. "Landscape Change in the Multi-Use, Multi-Ownership Forests of the Olympic Peninsula, Washington, 1988-2006." Thesis Committee Chair. (Research Assistant, Laboratory for Applications of Remote Sensing in Ecology, Oregon State University, Corvallis, OR).
- 2008 William A. Wetherholt, M.A. "A Survey of Ethics in United States Remote Sensing Education." Thesis Committee Chair. (Geography Instructor, North Dakota State University, Fargo, ND).
- 2007 Scott A. Abel, M.S. "The Impact of Human Landscape Features and Associated Predator Influences on Duck Nest Survival in the Prairie Pothole Region." Thesis Committee Chair. (GIS/IT Specialist, Red Lake Department of Natural Resources, Red Lake, MN).
- Lisa M. Kuchy, M.S. "Remote Sensing-Based Study of Land-Cover Changes Related to Mining and its Impacts on Marine Fauna: A Case Study in Goa, India." Thesis Committee Co-Chair (with S. Seelan). (Imagery Scientist, National Geospatial Intelligence Agency, Washington, D.C.).
- Kristofor P. Parson, M.S. "Predicting Selenium in Pinto Beans using Linear Regression and GIS." Thesis Committee Co-Chair (with J. Finley). (Research Analysis Specialist, Minnesota Pollution Control Agency, St. Paul, MN).

- 2006 Charles C. Geraci, M.S. "Remote Sensing Assessment of Widespread Saltcedar Infestation and Biological Control in Northwest Nevada." Thesis Committee Chair. (Instructor, NAVTEQ, Fargo, ND).
- 2005 Sarita Pachhai, M.S. "Comparison between 1m LIDAR and 30m NED DEMs for Temporary Floodwater Storage Estimations in the Red River of the North Basin." Thesis Committee Chair. (Senior GIS Analyst, PBS&J, Jacksonville, FL).
- Md. Shahriar Pervez, M.S. "Land Cover Dynamics and Conversion of Agricultural Land in Northwestern Bangladesh, 1973-2003." Thesis Committee Co-Chair. (with S. Seelan). (Environmental Scientist, SAIC, USGS EROS Data Center, Sioux Falls, SD).
- Brent E. Pringle, M.S. "Using High Spatial Resolution Imagery to Map Leafy Spurge and Canada Thistle in the North Unit of Theodore Roosevelt National Park." Thesis Committee Chair. (Emergency Manager, Stark County, Dickinson, ND).
- Kyle A. Glazewski, M.S. "Integration of GIS and Smoke Plume Dispersion Modeling for Prescribed Burns at Grand Forks Air Force Base." Thesis Committee Chair. (Research Engineer, Energy and Environmental Research Center, Grand Forks, ND).
- 2004 David A. Brookman, M.S. "Remote Sensing and Predictive Modeling of Saltcedar (Tamarix) in the Northern Great Plains." Thesis Committee Chair. (Image Intelligence Officer, Office of Military Support, National Geospatial-Intelligence Agency, Washington, D.C.).
- 2003 Paul R. Sethre, M.S. "Assessing Open Water Expansion from 1991-2002 in the Devils Lake Basin of North Dakota using Subpixel Classification of Remotely Sensed Data." Thesis Committee Chair. (Systems Engineer, NAVTEQ, Fargo, ND).
- Earl K. Davis, M.S. "Creating a Comprehensive Map of Roatan, Honduras, using GIS." Independent Study Advisor.
- Steven A. Moe, M.S. "Development of an Automated Method to Detect Change in Winter Wheat Acreage using Remotely Sensed Data and GIS." Independent Study Advisor. (GIS Director, Ramsey County, Devils Lake, ND).
- Casey J. Mutzenberger, M.S. "Application of GIS in the Surveying and Management of Piping Plover and Least Tern." Independent Study Advisor. (Environmental Scientist, Division of Air Quality, North Dakota Department of Health, Bismarck, ND).
- 2002 Nathan F. Smith, M.S. "Imaging Spectrometry to Map Potential Wildfire Fuels in Theodore Roosevelt National Park, North Dakota." Thesis Committee Chair. (GIS Specialist, Polk County, Crookston, MN).
- 2001 Heith M. Dokken, M.A. "Remote Sensing of Marijuana: A Preventative Form of Law Enforcement." Thesis Committee Chair. (North Dakota National Guard).

• **In Progress:**

- Cory Enger, M.S. Geography, Thesis Committee Chair, 2008-present.
- Peter Metzger, M.S. Geography, Thesis Committee Chair, 2008-present.

## GRADUATE COMMITTEES

### • **Completed (3 Ph.D., 16 M.S., 2 M.E.M.):**

- 2010 Brian Torborg, M.S. Geography
- 2009 Branden Bornemann, M.E.M. Earth System Science and Policy  
Sandhya Nepal, M.E.M. Earth System Science and Policy
- 2008 Anne Coyle, Ph.D. Biology  
David Hartzell, M.S. Space Studies  
James Lindstrom, M.S. Geography  
James Maskey, Ph.D. Biology  
Chad Parent, M.S. Biology
- 2007 Tedros Berhane, M.S. Earth System Science and Policy  
Julie Gallagher, M.S. Geography  
Eric Pulis, M.S. Biology
- 2006 Joshua Johnston, M.S. Geography  
Shankar Karki, Ph.D. Energy Engineering  
Penny Pettit, M.S. Earth System Science and Policy  
Gary Votaw, M.S. Geography
- 2005 Nsalambi Nkongolo, M.S. Geography  
Ganesh Pulicherla, M.S. Computer Science  
Shubhada Savant, M.S. Space Studies  
Olalekan Sodeinde, M.S. Space Studies
- 2004 Damon Grabow, M.S. Atmospheric Sciences  
Sara A. Milne, M.S. Biology

### • **In Progress:**

- Mark Blore, M.S. Geography
- Kenneth Cabarle, Ph.D. Biology
- Christina Cummings, M.S. Geography
- Matthew Doeringsfeld, Ph.D. Biology
- Sindhu Ethamukkala, M.S. Space Studies
- Beth Hagensen, Ph.D. Criminal Justice
- Kyna Hogg, M.S. Biology
- Matthew Burton-Kelly, Ph.D. Geology
- Charlotte Klesman, Ph.D. Communications
- AnnMarie Krmpotich, M.S. Biology
- Bethany Kurz, M.S. Space Studies
- Marc Kurz, M.S. Space Studies
- John Leonhart, Ph.D. Biology
- Shawn O'Neil, M.E.M. Earth System Science and Policy

- Erin Pederson, B.S. Geography
- Jessica Shahan, M.S. Biology
- Karew Schumaker, Ph.D. Geology
- Richard Suggs, M.S. Geology
- Dustin VanThuyne, M.S. Biology
- Chao Wang, M.S. Earth System Science and Policy
- Fawn Wasin Zi, M.S. Biology
- Matthew Weiler, Ph.D. Geology
- Qiang Zhou, M.S. Earth System Science and Policy

#### UNDERGRADUATE RESEARCH ADVISED AND/OR FUNDED

2009 Matthew Fahrenbruch, Geography major, Using Remote Sensing to Estimate Common Tansy Distribution: Woodside Prairie Restoration Site, Minnesota, Ronald E. McNair Post-baccalaureate Achievement Program.

2005 Paige Baker, Geography major, Using Airborne Hyperspectral Imagery to Map a Saltcedar Infestations near Lake Sakakawea, North Dakota, Ronald E. McNair Post-baccalaureate Achievement Program.

2004 Paige Baker, Geography major, GIS Analysis of the Spatial and Temporal Distribution of Mollusks in the Hell Creek Formation of Montana, Indians Into Geosciences (INGEOS) program (funded by J.H. Hartman).

Emily Grewe, Geography major, A Test of Borehole Paleoclimatology, NSF Paleoclimate Program for Global Change (summer funding).

Christopher Sanders, Geography major, NASA Native View Connections Program: Remote Sensing and GIS Training, North Dakota Space Training and Research (NDSTaR) program (summer funding).

2003 Torgrim Hoydahl, B.S. Geography/Peace Studies 2003, Project Advisor for UND Department of Interdisciplinary Studies Senior Project.

Avram Slinger, Aviation Management major, Satellite Bioclimatology, North Dakota EPSCoR Advanced Undergraduate Research Award (summer funding).

2002 Mitchell Schull, B.S. Geography 2003, North Dakota Trauma System Assessment (semester funding).

Nicholas Ziegelmann, B.S. Geography 2002, North Dakota Trauma System Assessment (semester funding).

2001 Ben Ehreth, B.S. Geography 2001, Continued Development of GIS Data for the TEAM Leafy Spurge Project, Cooperative Ecosystem Studies Units Cooperative Agreement, United States Department of the Interior (academic year and summer funding).

#### CURRICULUM DEVELOPMENT

- 2010 Rundquist, B.C., P.R. Sethre, and C.R. Enger. *Environmental Remote Sensing Laboratory Manual, Sixth Edition*. Grand Forks: University of North Dakota, Geography Department.
- 2008 Rundquist, B.C. and P.R. Sethre. *Environmental Remote Sensing and Air Photo Interpretation Laboratory Manual, Fifth Edition*. Grand Forks: University of North Dakota, Geography Department.
- 2006 Rundquist, B.C. and P.R. Sethre. *Environmental Remote Sensing and Air Photo Interpretation Laboratory Manual, Fourth Edition*. Grand Forks: University of North Dakota, Geography Department.
- 2005 Rundquist, B.C. and P.R. Sethre. *Environmental Remote Sensing and Air Photo Interpretation Laboratory Manual, Third Edition*. Grand Forks: University of North Dakota, Geography Department.
- 2003 Rundquist, B.C. and P.R. Sethre. *Environmental Remote Sensing and Air Photo Interpretation Laboratory Manual, Second Edition*. Grand Forks: University of North Dakota, Geography Department.
- 2001 Rundquist, B.C. *Environmental Remote Sensing and Air Photo Interpretation Laboratory Manual*. Grand Forks: University of North Dakota, Geography Department.
- 2000 Rundquist, B.C., J.A. Harrington, Jr., and A.J. Smith. *Introduction to Remote Sensing Laboratory Manual, Eighth Edition*. Manhattan: Kansas State University, Geography Department.
- 1999 Rundquist, B.C., and J.A. Harrington, Jr. *Introduction to Remote Sensing Laboratory Manual, Seventh Edition*. Manhattan: Kansas State University, Geography Department.
- 1996 Harrington, J.A., Jr., M.D. Nellis, and B.C. Rundquist. *Introduction to Remote Sensing Laboratory Manual, Sixth Edition*. Manhattan: Kansas State University Geography Department.

#### WORKSHOPS AND INVITED PRESENTATIONS (TEACHING FOCUS)

- 2006 Fundamentals and Applications of Remote Sensing, North Dakota GIS Users Conference, Bismarck, ND.
- 2005 Introduction to Remote Sensing Workshop, Introduction to Remote Sensing and Geographic Information System Integration for State, Local, and Tribal Government in North Dakota, NASA-National States Geographic Information Council Workshop, Bismarck, ND.
- 2003 The Use of Hyperspectral Remote Sensing for Vegetation Detection and Mapping, Guest Lecture in Space Studies 535: Satellite Information Processing, University of North Dakota.

- 2002 Applications of Remote Sensing in the Geosciences. Presentation to Indians into Geosciences (INGEOS), Department of Geology and Geological Engineering, University of North Dakota.
- 2001 From Plot to Planet: Remote Sensing of Vegetation on Multiple Scales. Guest Lecture in Space Studies 535: Satellite Information Processing, University of North Dakota.

## SCHOLARSHIP

### RESEARCH INTERESTS

- Spatial and temporal variation in vegetation distribution
- Land use/land cover change
- Environmental remote sensing
- Proximal remote sensing (field spectroscopy)

### REFEREED PAPERS (BOLD = Current or Former UND Student)

- 2010 Rundquist, B.C. and G.S. Vandeberg. Fully engaging students in the remote sensing process through field experience. *Journal of Geography* (submitted).
- Wetherholt, W.A.**, and B.C. Rundquist. A survey of ethics content in college-level remote sensing courses in the U.S. *Journal of Geography* 109(2):75-86.
- 2009 Rundquist, B.C. Unsupervised Classification, in B. Warf (ed.), *Encyclopedia of Geography*. SAGE Publications (in press).
- 2008 Todhunter, P.E., and B.C. Rundquist. Pervasive wetland flooding in the Glacial Drift Prairie of North Dakota (USA). *Natural Hazards* 46(1):73-88.
- 2007 Rundquist, B.C. and **D.A. Brookman**. Spectral characterization of the invasive shrub Saltcedar (*Tamarix spp.*) in North Dakota. *Geocarto International* 22(1):63-72.
- 2006 Rundquist, B.C., C.J. Henrie, and **E.J. Grewe**. Internet access to remotely sensed data: Satellite imaging made commonplace. *Journal of Map & Geography Libraries* 2(2):21-32.
- 2005 **Sethre, P.R.**, B.C. Rundquist, and P.E. Todhunter. Remote detection of prairie pothole ponds in the Devils Lake Basin of North Dakota. *GIScience & Remote Sensing* 42(4):277-296.
- 2004 Todhunter, P.E., and B.C. Rundquist. The nine-year flood: Terminal lake flooding and wetland expansion in Nelson County, North Dakota (USA). *Physical Geography* 25(1):68-85.
- Brookman, D.A., B.P. Pang, B.E. Pringle**, and B.C. Rundquist. Changes in urbanization in Northern Illinois from 1988 to 2001 using Landsat and census data. *Papers and Proceedings of the Applied Geography Conferences* 27:223-230.

- 2003 **Brookman, D.A.**, B.C. Rundquist, and R.S. Hanley. Prediction of Saltcedar (*Tamarix ramosissima*): A risk assessment using the Genetic Algorithm for Rule-Set Prediction (GARP) Model. *Papers and Proceedings of the Applied Geography Conferences* 26:462-470.
- 2002 Rundquist, B.C. The influence of canopy vegetation fraction on spectral measurements over native tallgrass prairie. *Remote Sensing of Environment* 81(1):129-135.
- Goodin, D.G., J.A. Harrington, Jr., and B.C. Rundquist. Land-cover change and associated trends in reflectivity and vegetation index in southwestern Kansas: 1972-1992. *Geocarto International* 17(1):43-50.
- Smith, N.F.**, B.C. Rundquist, R.R. Root, S.R. Hager, and B. Card. Imaging spectrometry to map potential wildfire fuels and Theodore Roosevelt National Park, North Dakota. *Papers and Proceedings of the Applied Geography Conferences* 25:276-284.
- Wu, J., M.D. Ransom, M.D. Nellis, G.J. Kluitenberg, H.L. Seyler, and B.C. Rundquist. Using GIS to assess and manage the Conservation Reserve Program in Finney County, Kansas. *Photogrammetric Engineering & Remote Sensing* 68(7):735-744.
- 2000 Rundquist, B.C., and J.A. Harrington, Jr. The effects of climatic factors on vegetation dynamics of tallgrass and shortgrass cover. *Geocarto International* 15(3):31-36.
- Rundquist, B.C., J.A. Harrington, Jr., and D.G. Goodin. Mesoscale satellite bioclimatology. *The Professional Geographer* 52(2):331-344.
- Rundquist, B.C., D.G. Goodin, and A.J. Smith. Relating biophysical processes to spatial patterns of spectral reflectance: A multiple-scale analysis of prairie vegetation canopies. *Papers and Proceedings of the Applied Geography Conferences* 23:190-198.
- 1999 Wu, J., M.D. Nellis, M.D. Ransom, H. Su, and B.C. Rundquist. Characterizing the relationships between land use and groundwater for Finney County, Kansas. *Geographical and Environmental Modeling* 3(2):203-215.
- Hutchinson, J.M.S., and B.C. Rundquist. Rural land-cover classification using multirate SAR imagery. *Papers and Proceedings of the Applied Geography Conferences* 22:332-340.
- 1998 Rundquist, B.C. The effects of climatic factors on vegetation dynamics across homogeneous land cover. *Papers and Proceedings of the Applied Geography Conferences* 21:424-431.
- Hutchinson, J.M.S., and B.C. Rundquist. Spatial modeling of net radiation over heterogeneous terrain. *Papers and Proceedings of the Applied Geography Conferences* 21:416-423.

1997 Lulla, K.P., and B.C. Rundquist. Space shuttle photography for detecting changes in Hong Kong's land cover. In *Hong Kong and the Pearl River Delta as Seen from Space Images*, special publication of *Geocarto International*, 57-62.

Rundquist, B.C. Spatial and temporal variation in NDVI response to climatic variables in Kansas. *Papers and Proceedings of the Applied Geography Conferences* 20:304-309.

Tao, Y., Z. Chi, J.A. Harrington, Jr., and B.C. Rundquist. Analysis of the relationship between NDVI and rainfall in subhumid agricultural areas and the influence of environmental factors. *Papers and Proceedings of the Applied Geography Conferences* 20:310-317.

#### UNREFEREED PROCEEDINGS PAPERS (BOLD = Current or Former UND Student)

2005 **Pachhai, S.**, B.C. Rundquist, B.B. Bolles, W.D. Peck, and X. Wang. Temporary floodwater storage volume estimation using 1-m LiDAR and 30-m DEMs in the Red River Basin of the North. *ASPRS Pecora 16 Conference Proceedings* (Paper #58).

1998 Rundquist, B.C., J.A. Harrington, Jr., D.G. Goodin, and Y. Tao. Regional and local NDVI response to climate variables in Kansas. *ASPRS-RTI Annual Convention and Exhibition Proceedings* 579-591.

1996 Runco, S., K.P. Lulla, M.F. McKay, and B.C. Rundquist. The NASA space shuttle Earth observation photography database. *Eco-Inforna '96 Proceedings* 11:779-784.

Miewald, T., S. Narumalani, B.C. Rundquist, and K.P. Lulla. Integration of space shuttle photography and SIR-C data for land-cover analysis. *ASPRS/ACSM Annual Convention and Exhibition Proceedings* 615-624.

#### PUBLISHED REPORTS

2009 Schroeder, T. and B. Rundquist. Red River tourism resource inventory. Red River Resource Conservation and Development. Grafton, ND.

2003 Todhunter, P.E., and B.C. Rundquist. Flood damage assessment and survey of mitigation efforts at Stump Lake, North Dakota: A study of a closed-basin lake flood. *Quick Response Research Grant Report #164*. Boulder, CO: Natural Hazards Research and Applications Information Center, University of Colorado. URL: <http://www.colorado.edu/hazards/qr/qr164/qr164.html>.

#### GENERAL READERSHIP

1997 Rundquist, B.C. Astronaut photography: portraits of the planet. *Geographic Insights* 7(3):11-13.

Rundquist, B.C., R. Bivens, K.P. Lulla, and M.D. Nellis. Kansas ... from above. *Kansas Wildlife and Parks* 54(2):24-27.

- 1996 Rundquist, B.C., D. Frank, T. Miewald, K.P. Lulla, and D. McLaughlin. GIS for astronaut training: First step into a new frontier. *GIS World* 9(4):44-47.
- Rundquist, B.C., and K.P. Lulla. Nebraska: Through the eyes of astronauts. *NEBRASKAland* 74(9):41-47.
- Rundquist, B.C., M.D. Nellis, and K. Price. Groundwater level declines in southwestern Kansas. *Geographic Insights* 6(2):12-14.
- 1993 Kuzelka, R., and C. Flowerday (eds). *Flatwater: A History of Nebraska and Its Water*. Lincoln, NE: Conservation and Survey Division. (Several articles by B.C. Rundquist).
- 1991 Rundquist, B.C. Summary of 35th Annual Groundwater Conference. *Great Plains Research* 1(1):168-170.

CONFERENCE PAPERS (ORAL) (**BOLD** = Current or Former UND Student)

- 2010 Goodwin, B.J., **S.K. Olimb, D.W. Cookman III**, and B.C. Rundquist. Landscape vs. patch effects on prairie insect communities. Ecological Society of America, Pittsburgh, PA.
- 2009 Rundquist, B.C., and G.S. Vandenberg. Fully engaging students in the remote sensing process through field experience. Association of American Geographers, Las Vegas, NV.
- 2008 Blue, S., and B.C. Rundquist. Development of the Turtle Mountain Field Station: An NSF-sponsored project to strengthen geospatial technologies education. Great Plains/Rocky Mountain Division of the Association of American Geographers, Grand Forks, ND.
- Wetherholt, W.A.**, and B.C. Rundquist. Ethics in U.S. remote sensing education. Association of American Geographers, Boston, MA.
- Wetherholt, W.A.**, and B.C. Rundquist. Barriers to the inclusion of ethics in remote sensing education. Great Plains/Rocky Mountain Division of the Association of American Geographers, Grand Forks, ND.
- 2007 Rundquist, B.C. Cultivating geospatial technology education partnerships with tribal colleges in North Dakota. AmericaView Annual Conference, Fayetteville, AR.
- Kuchy, L.M.**, B.C. Rundquist, S.K. Seelan, and R. Nigam. Remote sensing-based study of land-cover changes related to mining and its impacts on marine fauna: A case study in Goa, India. Association of American Geographers, San Francisco, CA.
- Rundquist, B.C. North Dakota View Accomplishments, 2006-07, North Dakota View 2007, Belcourt, ND.
- 2006 **Pervez, S.**, S.K. Seelan, and B.C. Rundquist. Land cover dynamics and conversion of agricultural land in northwestern Bangladesh, 1973-2003. American Geophysical Union 2006 Joint Assembly, Baltimore, MD.

- Gosnold, W., J. Majorowicz, P. Todhunter, B. Rundquist, X. Dong, J. Popham, S. Wood, S. Heinle, R. Robinson. Linking borehole temperatures to air temperatures. European Geosciences Union 2006 General Assembly, Vienna, Austria.
- Rundquist, B.C. North Dakota View Accomplishments, 2005-06, North Dakota View 2006, Fort Yates, ND.
- Rundquist, B.C., **P.R. Sethre**, and P.E. Todhunter. Remote detection of prairie pothole ponds. Prairie Division of the Canadian Association of Geographers, Rugby, ND.
- Rundquist, B.C. North Dakota View. Upper Midwest Chapter of the American Society for Photogrammetry and Remote Sensing, Brookings, SD.
- 2005 **Pachhai, S.**, B.C. Rundquist, B.B. Bolles, W.D. Peck, and X. Wang. Temporary flood storage volume estimations using 1-m LiDar and 30-m NED DEMs for the Red River or the North Basin. ASPRS Pecora 16: Global Priorities in Land Remote Sensing, Sioux Falls, SD.
- Rundquist, B.C., **P.R. Sethre**, and P.E. Todhunter. Remote detection of prairie pothole ponds in the Devils Lake Basin of North Dakota. Great Plains/Rocky Mountain Division of the Association of American Geographers, Laramie, WY.
- Geraci, C.C.**, B.C. Rundquist, and T. Dudley. Remote sensing assessment of widespread saltcedar infestation and biological control in northwest Nevada. Prairie Division, Canadian Association of Geographers, Winnipeg, MB.
- Pang-Brookman, B.P.**, B.C. Rundquist, G.S. Vandenberg, and **D.A. Brookman**. Investigating climatic variability of ice jams along the Red River of the North, North Dakota. Applied Geography Conference, Washington, D.C.
- Pringle, B.E.**, and B.C. Rundquist. Using high spatial resolution imagery to map leafy spurge and Canada thistle in the north unit of Theodore Roosevelt National Park. North Dakota Academy of Science, Grand Forks, ND.
- Pachhai, S.**, B.C. Rundquist, W.D. Peck, and B.A. Bolles. USGS 30-m and LIDAR 1-m DEMs to assess the accuracy of elevations in the Red River of the North Basin. North Dakota Academy of Science, Grand Forks, ND.
- Fischer, S.**, B. Goodwin, and B. Rundquist. The once vast prairie: Landscape and patch characteristics of fragments in the Prairie Parkland Province. Northern Plains Biological Symposium, Fargo, ND.
- 2004 Rundquist, B.C. Remote sensing as a tool for investigating human-environment interactions. National Council for Geographic Education, Kansas City, MO.
- Pervez, Md S.**, B.C. Rundquist, and S.K. Seelan. Mapping land cover change in northern Bangladesh (1973-1996) using multi-temporal Landsat MSS and TM imagery. Great

Plains/Rocky Mountain Division of the Association of American Geographers, Sioux Falls, SD.

Rundquist, B.C., **D.A. Brookman**, D.C. Rundquist, and R.L. Perk. Hyperspectral remote sensing of invasive saltcedar near Lake Sakakawea, North Dakota. Association of American Geographers, Philadelphia, PA.

**Baker, P.**, J.H. Hartman, and B.C. Rundquist. GIS analysis of the spatial and temporal distribution of mollusks in the Hell Creek Formation of Montana. Indians into Geosciences (INGEOS) Conference, Grand Forks, ND.

2003 Rundquist, B.C., and **A.F. Slinger**. The effects of land cover on climate-vegetation-sensor relationships in North Dakota. Great Plains/Rocky Mountain Division of the Association of American Geographers, Manhattan, KS.

**Brookman, D.A.**, B.C. Rundquist, and R.S. Hanley. Prediction of Saltcedar (Tamarix ramosissima): A risk assessment using the Genetic Algorithm for Rule-Set Prediction (GARP) model. Applied Geography Conference, Colorado Springs, CO.

Todhunter, P.E. and B.C. Rundquist. Damage assessment of Stump Lake and wetland flooding in Nelson County, North Dakota. First Annual International Water Conference, Moorhead, MN.

Todhunter, P.E., and B.C. Rundquist. Slow death by water: Ten years of flooding in Nelson County, North Dakota. Association of American Geographers, New Orleans, LA.

2002 **Smith, N.F.**, B.C. Rundquist, R.R. Root, S.R. Hager, and B. Card. Imaging spectrometry to map potential wildfire fuels and Theodore Roosevelt National Park, North Dakota. Applied Geography Conference, Binghamton, NY.

Rundquist, B.C., P.E. Todhunter, and **P.R. Sethre**. Assessing the loss of agricultural lands from a pervasive, closed-basin flooding event in the Devils Lake Basin of North Dakota. Applied Geography Conference, Binghamton, NY.

2001 Rundquist, B.C., and P.E. Todhunter. Assessing potential damage from a pervasive, closed-basin flooding event at Stump Lake, North Dakota. Great Plains/Rocky Mountain Division of the Association of American Geographers, Omaha, NE.

Rundquist, B.C. *In situ* remote sensing of green vegetation fraction over tallgrass prairie cover. American Society for Photogrammetry and Remote Sensing, St. Louis, MO.

Goodin, D.G., B.C. Rundquist, and A.J. Smith. Biophysical process and spatial-spectral response: a multi-scale analysis in tallgrass prairie. American Society for Photogrammetry and Remote Sensing, St. Louis, MO.

Harrington, J.A., Jr., B.C. Rundquist, D.G. Goodin, and A.J. Smith. The influence of crop rotation on change detection in the High Plains. American Society for Photogrammetry and Remote Sensing, St. Louis, MO.

- Rundquist, B.C. Close-range remote sensing for estimating vegetation fraction over a native tallgrass prairie canopy. Association of American Geographers, New York, NY.
- 2000 Rundquist, B.C., D.G. Goodin, and A.J. Smith. Relating biophysical processes to spatial patterns of spectral reflectance: A multiple-scale analysis of prairie vegetation canopies. Applied Geography Conference, Tampa, FL.
- Rundquist, B.C. Close-range remote sensing of canopy vegetation fraction over tallgrass prairie. Association of American Geographers, Pittsburgh, PA.
- 1999 Rundquist, B.C., J.A. Harrington, Jr., and D.G. Goodin. Mapping long- and short-term land-cover dynamics in southwest Kansas through data fusion. American Society for Photogrammetry and Remote Sensing, Portland, OR.
- Hutchinson, J.M.S., B.C. Rundquist, and J.A. Harrington, Jr. Rural land-cover classification using multirate SAR imagery. American Society for Photogrammetry and Remote Sensing, Portland, OR.
- Goodin, D.G., J.A. Harrington, Jr., and B.C. Rundquist. Land-use change and associated trends in surface reflectivity in southwestern Kansas, 1972-1992. American Society for Photogrammetry and Remote Sensing, Portland, OR.
- Harrington, J.A., Jr., B.C. Rundquist, and D.G. Goodin. Mesoscale satellite bioclimatology. American Society for Photogrammetry and Remote Sensing, Portland, OR.
- Rundquist, B.C. Variation in narrow-band spectral response across a water gradient on tallgrass prairie. Association of American Geographers, Honolulu, HI.
- Harrington, J.A., Jr., B.C. Rundquist, and D.G. Goodin. Mesoscale satellite bioclimatology. Association of American Geographers, Honolulu, HI.
- 1998 Rundquist, B.C. The effects of climatic factors on vegetation dynamics across homogeneous land cover. Applied Geography Conference, Louisville, KY.
- Rundquist, B.C., and J.A. Harrington, Jr. Regional and local NDVI response to climate variables in Kansas. American Society for Photogrammetry and Remote Sensing, Tampa, FL.
- 1997 Rundquist, B.C. NDVI response to climatic variation in Kansas. Applied Geography Conference, Albuquerque, NM.
- Rundquist, B.C. Spatial and temporal variation in NDVI response to climatic variables in Kansas. Great Plains/Rocky Mountain Division of the Association of American Geographers, Bozeman, MT.
- 1996 Rundquist, B.C. New technologies for teaching Earth science to astronauts. American Institute of Aeronautics and Astronautics, Houston, TX.

1995 Rundquist, B.C. The use of GIS to train astronauts. East Texas GIS Forum, Texas Regional Institute for Environmental Studies, Huntsville, TX.

CONFERENCE PAPERS (POSTER) (**BOLD** = Current or Former UND Student)

2010 **O'Neil, S.T.** and B.C. Rundquist. Mapping river ice break-up and jamming with SAR. UND Graduate School Scholarly Forum, Grand Forks, ND.

**VanThuyne, D.J.**, C.S. Dixon, K.R. Mehl, B.C. Rundquist, and B.J. Goodwin. Influence of habitat type on grassland bird diversity. Annual Meeting of the North Dakota Chapter of the Wildlife Society, Mandan, ND.

2009 **Braaten, J.**, and B. Rundquist. Landscape change in the multi-use, multi-ownership forests of the Olympic Peninsula, Washington, 1988-2006. UND Graduate School Scholarly Forum, Grand Forks, ND.

**Metzger, P.**, and B. Rundquist. Non-terrestrial remote sensing in archaeology. UND Graduate School Scholarly Forum, Grand Forks, ND.

2008 **Braaten, J.**, and B. Rundquist. The Catch-22 of semi-empirical satellite image topographic correction. UND Graduate School Scholarly Forum, Grand Forks, ND.

2007 **Berhane, T.**, X. Zhang, M. Hill, and B. Rundquist. Remote sensing of heat fluxes using SEBAL: A comparison between Landsat and MODIS. American Geophysical Union Fall Meeting, San Francisco, CA.

2006 **Abel, S.A.**, and B.C. Rundquist. The impact of human landscape features and associated predator influences on duck nest survival in the Prairie Pothole Region. Great Plains/Rocky Mountain and West Lakes Divisions of the Association of American Geographers, Lincoln, NE.

**Kuchy, L.M.**, B.C. Rundquist, S.K. Seelan, and R. Nigam. Remote sensing-based study of land-cover changes related to mining and its impacts on marine fauna: A case study in Goa, India. Great Plains/Rocky Mountain and West Lakes Divisions of the Association of American Geographers, Lincoln, NE.

**Wahl, S.**, and B. Rundquist. Remote Sensing and Geospatial Technologies for North Dakota. Prairie Division of the Canadian Associate of Geographers, Rugby, ND.

**Geraci, C.C.**, B.C. Rundquist, and T. Dudley. Assessment of widespread saltcedar (*Tamarix spp.*) monocultures and biological control in northwest Nevada using moderate scale satellite imagery. Association of American Geographers, Chicago, IL.

**Baker, P.R.**, J.H. Hartman, and B.C. Rundquist. GIS analysis of the spatial and temporal distribution of Cretaceous mollusks in the Hell Creek Formation of Montana. Association of American Geographers, Chicago, IL.

- 2005 **Baker, P., D. Brookman**, and B.C. Rundquist. Remote detection of a saltcedar infestation near Lake Sakakawea, North Dakota, using airborne hyperspectral imagery. ASPRS Pecora 16: Global Priorities in Land Remote Sensing, Sioux Falls, SD.
- Rundquist, B., G. Halvorson, **S. Abel**, S. Savant, and D. Stonefish. Workshop: Using GPS/GIS to map leafy spurge infestations on Standing Rock Sioux lands. NASA Space Grant Meeting, Western Region, Grand Forks, ND.
- Fischer, S.**, B. Rundquist, and B. Goodwin. The once vast prairie: Landscape and patch characteristics of fragments in the Prairie Parkland Province. UND Graduate School Scholarly Forum, Grand Forks, ND.
- Pang, B.**, B. Rundquist, G. Vandeberg, and **D. Brookman**. Ice jams along the Red River of the North, North Dakota. UND Graduate School Scholarly Forum, Grand Forks, ND.
- 2004 **Pachhai, S.**, W.D. Peck, and B.C. Rundquist. Comparison of temporary flood water storage volume estimations using 1-m LIDAR and 30-m NED DEM in the Red River Basin. Great Plains/Rocky Mountain Division of the Association of American Geographers, Sioux Falls, SD.
- Rundquist, B.C., and S. Laducer. North Dakota NativeConnections: Geospatial technology goals for Turtle Mountain Community College. NASA Space Grant Meeting, Western Region, Houston, TX.
- Sanders, C.R.**, and B.C Rundquist. NASA Native View Connections program: Remote sensing and GIS training. NASA Space Grant Meeting, Western Region, Houston, TX.
- Rundquist, B.C., S. de Silva, and S. Laducer. The NativeConnections program in North Dakota: Enhancing geospatial technology education and use on tribal lands. Space on the Prairie Conference, Grand Forks, ND.
- Pervez, S., B.C. Rundquist, and S.K. Seelan. Changes in vegetation dynamics and conversion of agricultural land in Bangladesh, 1973-2003. Space on the Prairie Conference, Grand Forks, ND.
- Gosnold, Jr. W., P. Todhunter, X. Dong, B. Rundquist, J. Majorowicz, and D. Blackwell. A multidisciplinary approach to assessing the causal components of climate change. American Geophysical Union 2004 Joint Assembly, Montreal, Canada.
- Rundquist, B.C., D.C. Munski, and D.A. Hansen. One-hundred and twenty years of geography on the northern plains: Department of Geography, University of North Dakota. Association of American Geographers, Philadelphia, PA.
- Eggleston, S.M.**, and B.C Rundquist. University of North Dakota safety study. UND Graduate School Scholarly Forum, Grand Forks, ND.
- Gosnold, Jr., W., P. Todhunter, X. Dong, B. Rundquist, J. Majorowicz and D. Blackwell. Multidisciplinary approach to assessing the causal components of climate change. UND Graduate School Scholarly Forum, Grand Forks, ND.

- Karki, S.**, and B.C. Rundquist. Wind power suitability classification in North Dakota. UND Graduate School Scholarly Forum, Grand Forks, ND.
- Milne, S.**, R. Sweitzer, and B. Rundquist. Habitat suitability modeling as a tool for managing prairie dogs in western North Dakota. UND Graduate School Scholarly Forum, Grand Forks, ND.
- Pachhai, S.**, B.C. Rundquist, and W.D. Peck. Identification of potential areas for temporary flood water storage in the Red River Basin. UND Graduate School Scholarly Forum, Grand Forks, ND.
- 2003 Rundquist, B.C. and P.E. Todhunter. Determining the extent of terminal lake and wetland flooding in Nelson County, North Dakota: 1991-2001. Space on the Prairie Conference, Grand Forks, ND.
- Slanger, A.F.**, and B.C. Rundquist. Statistical Characterization of Climate-Vegetation-Satellite Sensor Relationships in North Dakota: 1994-2002. 4<sup>th</sup> Biennial North Dakota/South Dakota Joint EPSCoR Conference, Fargo, ND.
- Brookman, D.A.**, B.C. Rundquist, and R.S. Hanley. Saltcedar invasion into North Dakota: A predictive analysis using the Genetic Algorithm for Rule-Set Prediction (GARP). 27<sup>th</sup> Annual Meeting of the Prairie Division of the Canadian Association of Geographers, Gimli, MB.
- Moe, S.A.**, B.C. Rundquist, D.C. Munski, D.B. Pool, and D.N. Morgando. Development of an automated method to detect change in winter wheat acreage using remotely sensed data. Great Plains/Rocky Mountain Division of the Association of American Geographers, Manhattan, KS.
- Sethre, P.R.**, and B.C. Rundquist. Characterization of Historical Land Use/Land Cover Change in Eastern Nelson County, North Dakota. Great Plains/Rocky Mountain Division of the Association of American Geographers, Manhattan, KS.
- Brookman, D.A.**, and B.C. Rundquist. Proximal Remote Sensing of Saltcedar (Tamarix ramosissima) near Lake Sakakawea, North Dakota. Mississippi Gulf Coast Geospatial Conference, Biloxi, MS.
- 2002 **Schull, M., N. Ziegelmann**, B. Rundquist, and D. Hansen. Geographic Information Systems for improved management of emergency medical services in North Dakota. Upper Great Plains Technology Conference, Fargo, ND.
- Rundquist, B.C., D.A. Hansen, **M. Schull**, and **N. Ziegelmann**. Creating a better rural emergency ambulance service using GIS. North Dakota EPSCoR Science, Engineering and Mathematics 10<sup>th</sup> Annual Poster Session, Grand Forks, ND.
- 2001 Rundquist, B.C. Close-range remote sensing for estimating vegetation fraction over a native tallgrass prairie canopy. Association of American Geographers 97th Annual Meeting, New York, NY.

- 1999 Hutchinson, J.M.S., and B.C. Rundquist. Spatial modeling of net radiation over heterogeneous terrain. Association of American Geographers 95th Annual Meeting, Honolulu, HI.
- Rundquist, B.C., J.A. Harrington, Jr., D.G. Goodin, and H. Fang. Mapping long- and short-term land-cover change in southwest Kansas. Kansas Statewide EPSCoR Conference, Topeka, KS.
- Harrington, J.A., Jr., B.C. Rundquist, and D.G. Goodin. Mesoscale satellite bioclimatology. Kansas Statewide EPSCoR Conference, Topeka, KS.
- 1998 Goodin, D.G., J.A. Harrington, Jr., and B.C. Rundquist. Agricultural land use and irrigation expansion in southwestern Kansas, 1972-1992. Association of American Geographers 94<sup>th</sup> Annual Meeting, Boston, MA.
- Goodin, D.G., J.A. Harrington, Jr., and B.C. Rundquist. Agricultural land use and irrigation expansion in southwestern Kansas, 1972-1992. Water and the Future of Kansas 15<sup>th</sup> Annual Conference, Manhattan, KS.

#### PANEL DISCUSSIONS

- 2004 Strategies for Strong Consortium Partnerships, AmericaView 2004, Sioux Falls, SD.

#### INVITED PRESENTATIONS (RESEARCH FOCUS)

- 2010 Remote Detection of Invasive Plant Species, South Dakota State University, 41<sup>st</sup> Annual Geography Convention, Brookings, SD.
- 2004 Field-Based and Aerial Remote Sensing of Invasive Saltcedar near Lake Sakakawea, North Dakota, North Dakota Saltcedar Task Force, Riverdale, ND.
- 2003 Ecological Remote Sensing at Multiple Spatial Scales, Department of Biology Forum, University of North Dakota.
- GIS Applications in Health Geography, College of Nursing Research Seminar, University of North Dakota.
- Development of an Automated Method to Detect Change in Winter Wheat Acreage using Remotely Sensed Data and GIS, Ducks Unlimited, Bismarck, ND (with S. Moe).
- The Quiet Flood: Terminal Lake Flooding and Wetland Expansion in Nelson County, North Dakota, Sigma Xi, University of North Dakota Chapter, 2002-2003 Seminar Series (with P. Todhunter).
- Setting the Stage for Ecological Interactions: Documenting Historical Patterns of Landscape Change, North Dakota EPSCoR RNEST Working Group, Biocomplexity Cluster Workshop, University of North Dakota.

1996 GIS in Space. Presentation to Department of Geography, Kansas State University, Manhattan, KS.

GRANTS, CONTRACTS, AWARDS, AND FELLOWSHIPS (*Total Dollars: \$1,173,635*)

2010 **North Dakota View**, U.S. Geological Survey and AmericaView Inc., \$23,500 (PI and Consortium Director).

2009 **North Dakota View**, U.S. Geological Survey and AmericaView Inc., \$23,152 (PI and Consortium Director).

**Travel to Las Vegas; March 23-26, 2009**, Senate Scholarly Activities Committee Travel Award, University of North Dakota Office of Research and Program Development, \$389.

2008 **Turtle Mountain Field Station**, National Science Foundation, Advanced Technical Education Program, \$150,000, 2 years (PI).

**North Dakota View**, U.S. Geological Survey and AmericaView Inc., \$23,989 (PI and Consortium Director).

**Replacement Computers for the Geographic Analysis and Remote Sensing Lab (GARSL)**, Student Technology Fee Award, University of North Dakota, \$17,580 (with G. Vandenberg).

**Small Equipment Award**, Office of the Vice President for Research, University of North Dakota, \$1,200.

**Small Equipment Award**, Office of the Vice President for Research, University of North Dakota, \$2,500.

**Public Scholarship Grant**, Center for Community Engagement, University of North Dakota, \$3,165.

**Faculty Instructional Development Grant**, Office of Instructional Development, University of North Dakota, \$624.

2007 **North Dakota View**, U.S. Geological Survey and AmericaView Inc., \$51,000 (PI and Consortium Director).

**Small Equipment Award**, Office of the Vice President for Research, University of North Dakota, \$2,500.

2006 **North Dakota View**, U.S. Geological Survey and AmericaView Inc., \$84,000 (PI and Consortium Director).

**Little Missouri National Grasslands Golden Eagle Project**, U.S. Department of Agriculture, U.S. Forest Service, \$40,000 (co-PI with R. Crawford).

- Travel to Chicago; March 8-11, 2006**, Senate Scholarly Activities Committee Travel Award, University of North Dakota Office of Research and Program Development, \$276.
- 2005 **North Dakota View**, U.S. Geological Survey and AmericaView Inc., \$89,494 (PI and Consortium Director).
- Replacement Computers for the Geographic Analysis and Remote Sensing Lab (GARSL)**, Student Technology Fee Award, University of North Dakota, \$8,505 (with D. Munski and G. Vandenberg).
- Smart Room Equipment for Geographic Analysis Laboratory, Room 116 O'Kelly Hall**, Student Technology Fee Award, University of North Dakota, \$21,147 (with G. Vandenberg, D. Munski, and D. Hansen).
- 2004 **North Dakota View, AmericaView Associate Membership**, U.S. Geological Survey and AmericaView Inc. (PI and Consortium Director), no funding.
- Changes in Vegetation Dynamics and Conversion of Agricultural Land in Bangladesh, 1973-2004**, North Dakota NASA EPSCoR Faculty Seed Award (NASA Grant #NCC5-582), \$4,975 (PI).
- Native View Connections: A Multi-Consortium Workforce Development Proposal**, NASA Space Grant College and Fellowship Program, \$25,000 (6-state consortium, each with a PI; ND PI is S. de Silva; B. Rundquist is ND's Remote Sensing Specialist).
- NASA Native View Connections Program: Remote Sensing and GIS Training**, North Dakota Space Training and Research (NDSTaR), NASA Space Grant College and Fellowship Program, NASA WorkForce Development Initiative, \$4,000.
- Computers to Support Instructional Needs in Geographic Information Sciences**, Student Technology Fee Award, University of North Dakota, \$35,460.
- Travel to Kansas City; October 21-24, 2004**, Senate Scholarly Activities Committee Travel Award, University of North Dakota Office of Research and Program Development, \$227.
- 2003 **A Test of Borehole Paleoclimatology**, National Science Foundation, Paleoclimate Program for Global Change, University of North Dakota, \$385,768, 3 years (W.D. Gosnold, PI, P.E. Todhunter, X. Dong, and B.C. Rundquist, co-PIs).
- Detection and Prediction of Saltcedar Invasion in North Dakota**, North Dakota NASA EPSCoR Faculty Seed and Student Research Awards (NASA Grant #NCC5-582), \$13,256 (PI).
- Investigation of Saltcedar Invasion near Lake Sakakawea, North Dakota**, Upper Midwest Aerospace Consortium, \$3,200 (PI).

**Collection of Aerial Hyperspectral Image Data over Lake Sakakawea, North Dakota**, University of North Dakota Office of Research and Program Development, \$5,925 (PI).

**Characterization of Historical Land Use/Land Cover and Land Use/Land Cover Change for the Amphibian Study Site in Eastern Nelson County, North Dakota** (continued), North Dakota NSF EPSCoR RNEST sub-project funded through the Department of Biology, University of North Dakota, \$6,000 (PI on sub-project).

**Satellite Bioclimatology**, North Dakota EPSCoR Advanced Undergraduate Research Award, \$2,500 (PI).

**Travel to Manhattan, KS; October 2-4, 2003**, Senate Scholarly Activities Committee Travel Award, University of North Dakota Office of Research and Program Development, \$441.

**Geographic Information Sciences Course Software Fees**, Student Technology Fee Award, University of North Dakota, \$12,574 (with P.E. Todhunter).

2002 **Characterization of Historical Land Use/Land Cover and Land Use/Land Cover Change for the Amphibian Study Site in Eastern Nelson County, North Dakota**, North Dakota NSF EPSCoR RNEST sub-project funded through the Department of Biology, University of North Dakota, \$21,030 (PI on sub-project).

**Assessing Loss of Agricultural Lands to Wetland Expansion in the Devils Lake Basin of North Dakota using Satellite Remote Sensing**, Faculty Research Seed Money Award, University of North Dakota, \$8,221 (co-PI with P.E. Todhunter).

**Request for Equipment to Meet Geographic Information Systems Instructional Needs**, Student Technology Fee Award, University of North Dakota, \$27,040 (with M. Hemmasi).

**Installation of Network Connections**, Student Technology Fee Award, University of North Dakota, \$3,200 (with M. Hemmasi).

**Purchase of GPS Units for Instructional Purposes**, Student Technology Fee Award, University of North Dakota, \$1,975 (with M. Hemmasi).

**Travel to Binghamton, New York; October 26-28, 2002**, Senate Scholarly Activities Committee Travel Award, University of North Dakota Office of Research and Program Development, \$381.

2001 **Development of an Automated Method to Detect Change in Winter Wheat Acreage using Remotely Sensed Data**, Ducks Unlimited Inc., \$6,500 (PI).

**North Dakota Trauma System Assessment**, U.S. Department of Health, Health Resources and Services Administration, Maternal and Child Health Bureau, \$45,000 (co-PI with D.A. Hansen and UND Center for Rural Health).

**Continued Development of GIS Data for the TEAM Leafy Spurge Project**, Cooperative Ecosystem Studies Units Cooperative Agreement, United States Department of the Interior, National Park Service, Theodore Roosevelt National Park, and the University of North Dakota, \$9,996 (PI).

**Development of Web-Based Exercises for Geography 275: Remote Sensing of the Environment**, Summer Instructional Development Professorship, University of North Dakota Office of Instructional Development, \$2,700 (PI).

**Flood Damage Assessment and Survey of Mitigation Efforts at Stump Lake, North Dakota: A Case Study of a Closed-Basin Lake Flood**, Quick Response Research Program, Natural Hazards Research and Applications Information Center, University of Colorado, Boulder, \$1,175 (co-PI with P.E. Todhunter).

2000 **Request to Purchase AVHRR Satellite Data**, UND Space Grant Proposal, \$2,820.

**Travel to New York, New York; February 28-March 4, 2001**, Senate Scholarly Activities Committee Travel Award, University of North Dakota Office of Research and Program Development, \$400.

**Travel to New York, New York; February 28-March 4, 2001**, Upper Midwest Aerospace Consortium Travel Grant, \$850.

1994 **Graduate School Fellowship**, Kansas State University, \$1,000.

1993 **Graduate School Fellowship**, Kansas State University, \$1,000.

## SERVICE

### PROFESSIONAL SERVICE

#### • **Scientific Journals:**

- Managing Editor, *Geocarto International*, 2008-
- Book Review Editor, *Photogrammetric Engineering & Remote Sensing*, 2007-2010

#### • **Offices in Professional Associations/Honor Societies:**

- Director, Remote Sensing Specialty Group, Association of American Geographers, 2009-2011
- President, Upper Midwest Chapter, American Society for Photogrammetry and Remote Sensing, 2007-2009
- Vice-Chair (2006-2007), Chair (2007-2008), and Past Chair (2008-2009), Great Plains/Rocky Mountain Division, Association of American Geographers
- Conference Organizer, Joint Meeting of the Great Plains/Rocky Mountain Division Association of American Geographers, and Upper Midwest Chapter, American Society for Photogrammetry and Remote Sensing, 2008
- Student Director, Remote Sensing Specialty Group, Association of American Geographers, 1997-1998 and 1994-1995
- President, Gamma Theta Upsilon, Beta Psi Chapter, Kansas State University, 1994-1995

• **Manuscripts Reviews for:**

- *Annals Botanici Fennici*
- *Geocarto International*(x3)
- *Hydrology and Earth System Sciences Discussions*
- *International Journal of Remote Sensing*
- *Journal of Arid Environments*
- *Journal of Geoscience Education*
- *Great Plains Research*
- *Papers and Proceedings of the Applied Geography Conferences*(x6)
- *Photogrammetric Engineering and Remote Sensing* (x2)
- *Prairie Perspectives: Proceedings of the Canadian Association of Geographers, Prairie Division Annual Meeting, 2000*
- *Proceedings of the 18<sup>th</sup> North American Prairie Conference*
- *Rangeland Ecology and Management*
- *Remote Sensing of Environment* (x2)
- *Wetlands* (x2)

• **Book Chapters Reviewed:**

- The Vegetation of Saskatchewan, In: *The Geography of Saskatchewan*. University of Regina: Department of Geography, 2003.

• **Textbooks/Lab Manuals Reviewed:**

- Christopherson, R.W., and C.E. Thomsen. 2009. *Applied Physical Geography: Geosystems in the Lab*, Upper Saddle River, NJ: Pearson Education, Inc.
- Christopherson, R.W., and C.E. Thomsen. 2006. *Applied Physical Geography: Geosystems in the Lab*, Upper Saddle River, NJ: Pearson Education, Inc.
- Marsh, William. 2001. *Introduction to Physical Geography*, New York, NY: W.H. Freeman and Company.
- Christopherson, R.W., and G.L. Hobbs. 2000. *Applied Physical Geography: Geosystems in the Lab*, Upper Saddle River, NJ: Prentice-Hall, Inc.

• **Proposals Reviewed:**

- AmericaView Consortium (3 proposals for continued assistance in 2010)
- AmericaView Consortium (3 proposals for continued assistance in 2009)
- AmericaView Consortium (6 proposals for full membership in 2007)
- NASA-USDA Land Cover/Land Use Change Initiative (10 pre-proposals and 6 full proposals, plus panel participation in Washington, D.C., 2005)
- NASA Earth System Science Fellowship Graduate Student Program
- NSF Faculty Early Career Development (CAREER) Program
- NSF Geography and Regional Science Program (x2)
- USDA Small Business Innovation Research (SBIR) Program Phase I (x4)
- USDA Small Business Innovation Research (SBIR) Program Phase II
- Canadian Foundation for Climate and Atmospheric Sciences (CFCAS)
- Azerbaijan-U.S. Bilateral Grants Program of the U.S. Civilian Research and Development Foundation (CRDF)
- North Dakota NASA EPSCoR Seed Money Program (x3)

• **Professional Conference Planning:**

- North Dakota GIS Users Conference, Nov. 2-4, 2009, Grand Forks, ND, co-organizer with Bob Nutsch, State of North Dakota GIS Coordinator (210 participants, 27 exhibitors, 10 workshops, 49 presentations)
- Upper Midwest Chapter of the American Society for Photogrammetry and Remote Sensing, Oct. 7, 2009, USGS EROS Data Center, Sioux Falls, SD, organizer (35 participants, 11 presentations, 3 posters)
- Great Plains/Rocky Mountain Division of the Association of American Geographers Sept, 12-13, 2008, Grand Forks, ND, organizer (145 participants, 6 exhibitors, 55 presentations, 15 posters, 1 panel discussion)
- North Dakota View 2007, Belcourt, ND
- North Dakota View 2006, Fort Yates, ND

• **Professional Meeting Service:**

- Judge, Remote Sensing Specialty Group Student Paper Competition, Association of American Geographers, Las Vegas, NV, 2009
- Chair, Invasive Plants Session, Pecora 16, Sioux Falls, SD, 2005
- Chair, GIScience Applications in Human and Physical Geography Session, Great Plains/Rocky Mountain Division of the Association of American Geographers, Laramie, WY, 2005
- Judge, Remote Sensing Specialty Group Student Paper Competition, Association of American Geographers, Philadelphia, PA, 2004
- Chair, Environmental Assessment Session, Great Plains/Rocky Mountain Division of the Association of American Geographers, Manhattan, KS, 2003
- Chair, Remote Sensing and Climate Change Session, Great Plains/Rocky Mountain Division of the Association of American Geographers, Omaha, NE, 2001
- Chair, Environmental Assessment and Analysis Session, Applied Geography Conference, Tampa, FL, 2000
- Chair, Physical Geography II Session Chair, Prairie Division of the Canadian Association of Geographers, Devils Lake, ND, 2000
- Remote Sensing Specialty Group Student Paper Competition Organizer, Association of American Geographers, Honolulu, HI, 1999
- Remote Sensing Specialty Group Student Poster Competition Organizer. Association of American Geographers, Honolulu, HI, 1999

• **Other:**

- ASPRS Member Champion, 2010
- ASPRS Member Champion, 2008

UNIVERSITY SERVICE

- Faculty Research Seed Money, Mathematics and Natural Sciences Sub-Committee, University of North Dakota, 2010
- College of Arts and Sciences Tenure, Reappointment, and Promotion Committee, University of North Dakota, 2009-2012
- University Senate Intercollegiate Athletics Committee, University of North Dakota, 2009-2012
- College of Arts and Sciences Executive Committee, University of North Dakota, 2008-2009
- Mentor, Alice T. Clark/UND Foundation Scholars Mentoring Program, 2007-2009
- University Senate Honors Committee, University of North Dakota, 2007-2010

- College of Arts and Sciences Budget Committee, University of North Dakota, 2004-2007
- University Senate Student Policy Committee, University of North Dakota, 2002-2005 (Chair 2004-2005)
- Environmental Science Undergraduate Major Planning Committee, University of North Dakota, 2002-2003
- Faculty Research Seed Money, Mathematics and Natural Sciences Sub-Committee, University of North Dakota, 2001-2005
- Environmental Systems Research Institute (ESRI) Virtual Campus Subscription Manager for UND, 2001-2006
- Undergraduate Program Evaluation for Anthropology, University of North Dakota, 2001-2002
- Earth System Science Program Planning Committee, University of North Dakota, 2000-2002

#### DEPARTMENTAL SERVICE

- Member, Urban Geography/GIS Position Search Committee, 2006-2007
- Member, UND Geography Department Building Committee, 2004
- Chair, Environmental Geographer Search Committee, 2003-2004
- Director, Graduate Geographic Information Science Certificate Program, Department of Geography, University of North Dakota, 2002-2008
- Department Webmaster, 2000-
- Director, Geographic Analysis and Remote Sensing Lab, Department of Geography, University of North Dakota, Grand Forks, 2000-
- Department Head Search Committee, Graduate Student Member, Geography Department, Kansas State University, 1997 and 1998
- Department of Geography "Brown Bag" Lecture Series, Director, Kansas State University, 1994-1995 and 1996-1999

#### COMMUNITY SERVICE

- Coordinated a 2-week investigative research site for the Dakota Science Center's Science in the Circle of Life Program, 2003.
- Facilitated the development of media coverage maps for the Ralph Engelstad Arena, 2003.
- Facilitated the development of U.S. Potato Harvest Seasons and Potato Production maps for the Northern Great Plains Potato Growers Association, 2003.
- Assisted in the development of ground visibility maps for the Federal Aviation Administration, Grand Forks Regional Airport Control Tower (received letter of commendation), 2002.

#### PRESENTATIONS (OUTREACH)

2005 Introduction to Remote Sensing and GPS Workshop, NASA Native View Connections, Sitting Bull College, Fort Yates, ND.

Remote Sensing and GIS Activities at UND Geography, Introduction to Remote Sensing and Geographic Information System Integration for State, Local, and Tribal Government in North Dakota, NASA-National States Geographic Information Council Workshop, Bismarck, ND.

2004 Geospatial Technology: A World of Opportunity, North Dakota Department of Career and Technical Education, All Service Conference, Bismarck, ND.

The AmericaView Program, North Dakota Full GISTC Meeting, Bismarck, ND.

## OTHER

### AWARDS, HONORS, AND HONOR SOCIETIES

- Presidential Citation, American Society for Photogrammetry and Remote Sensing, 2010
- North Dakota Spirit Faculty Achievement Award, UND, 2009
- Distinguished Alumnus Award, Department of Geography, Kansas State University, 2008
- Alumni Advisory Board, Department of Geography, Kansas State University, 2007-
- Supervised a thesis by Charles C. Geraci, which won the UND Graduate School's Distinguished Thesis Award in 2007
- Received a Certificate of Appreciation for contributions to the Ronald E. McNair Post-baccalaureate Achievement Program, 2004-2005
- First Place, Student Poster Competition, Association of American Geographers, Remote Sensing/GIS Specialty Groups, Honolulu, HI, 1999 (with J.M.S. Hutchinson)
- First Place, Student Paper Competition, Applied Geography Conference, Louisville, KY, 1998
- National Outstanding Graduate Student Scholarship (Robert G. Buzzard award), Gamma Theta Upsilon International Geographical Honor Society, 1997
- Best Paper, American Institute of Aeronautics and Astronautics, Houston chapter, 1996
- Outstanding Graduate Teaching Assistant, Department of Geography, Kansas State University, 1994-95 academic year
- Phi Kappa Phi, Kansas State University chapter, 1995
- Gamma Theta Upsilon, Kansas State University chapter, 1994

### PROFESSIONAL SOCIETY MEMBERSHIPS

- American Society for Photogrammetry and Remote Sensing (ASPRS), 1996-present
- Association of American Geographers (AAG), 1993-present
- IEEE Geoscience and Remote Sensing, 2002-present
- Sigma Xi, 2000-present