

CURRICULUM VITAE

BRADLEY C. RUNDQUIST

GENERAL INFORMATION

CONTACT

College of Arts & Sciences
501 N. Columbia Road, Stop 8038
University of North Dakota
Grand Forks, ND 58202-8038
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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

2019-Present **Dean**, College of Arts & Sciences, UND
2011-Present **Professor**, Department of Geography, UND
2008-Present **Managing Editor**, *Geocarto International*, Taylor & Francis
2018-2019 **Interim Dean**, College of Arts & Sciences, UND
2015-2018 **Associate Dean for Research**, College of Arts & Sciences, UND
2015-2018 **Interim Chair**, Department of Philosophy & Religion, UND
2015-2018 **Interim Chair**, Department of American Indian Studies, UND
2015-2017 **Interim Director**, Interdisciplinary Studies Program, UND
2008-2014 **Chair**, Department of Geography, UND
2004-2011 **Associate Professor**, Department of Geography, UND
2002-2008 **Director**, Geographic Information Science Graduate Certificate, UND
2000-2008 **Director**, Geographic Analysis and Remote Sensing Laboratory, UND
2000-2004 **Assistant Professor**, Department of Geography, UND
1995-1996 **Associate Scientist**, Lockheed Martin Engineering & Sciences Company, NASA Johnson Space Center, Houston, TX
1991-1992 **Assistant City Editor**, *The Messenger* (Daily Newspaper), Fort Dodge, IA

TEACHING

EXPERTISE

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

COURSES TAUGHT

- Global Physical Environment (GEOG 121 at UND)
- Environmental Remote Sensing & 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)
- North Dakota Digital Atlas Project (A&S 499 at UND)
- Advanced Techniques in Geographic Information Systems (GEOG 574 at UND)
- Graduate Seminar in Remote Sensing (GEOG 575 at UND)
- Geographic Research and Writing (GEOG 578 at UND)
- Field Methods in Geography (GEOG 421/576 at UND)

GRADUATE RESEARCH ADVISED AT UND

• **Completed (1 Ph.D., 22 M.S. Theses, 4 M.A. Theses, 5 M.S. Independent Studies)**

2023 Zinat Ara, M.S., “Changes in Crop Diversity and Associated Drivers in the Red River of the North Valley.” Thesis Committee Chair.

2021 Morgen W.V. Burke, Ph.D. “Scaling Near-Surface Remote Sensing to Calibrate and Validate Satellite Monitoring of Grassland Phenology.” Dissertation Committee Co-Chair (with J. VanLooy).

2020 Anaí Caparo Bellidó, M.S. “Automated Fractional Snow Cover Monitoring From Near-Surface Remote Sensing In Grassland.” Thesis Committee Chair.

Eohjin Lee, M.S. “Mapping and Quantifying the Spatial Characteristics of Agricultural Drainage Systems in the Red River Valley of the North. Thesis Committee Chair.

2019 Kelli K. Fika, M.A. “Analyzing Changes in Rural Town Development and Spatial Morphology: A Case Study of Lakota, North Dakota, 1908-2018.” Thesis Committee Chair.

2017 Jacqueline M. Amor, M.S. “An Evaluation of Elk Home Range Variation in North Dakota.” Thesis Committee Co-Chair (with J. Boulanger).

- Nels E. Anderson, M.S., “Analyzing GPS Site Physicalities of *Acer rubrum* by GIS to Determine Characteristics of Potential Spread into the Boundary Waters Canoe Area Wilderness (BWCA).” Independent Study Advisor.
- Earl L. Klug, M.S., “Census of Shelterbelts in Walsh County, North Dakota, using Digital Aerial Photography and Light Detection and Ranging (LIDAR).” Independent Study Advisor.
- Eric F. Torgerson, M.S., “Oil Extraction Infrastructure Development and Resulting Land-Cover Change in McKenzie County, North Dakota, 2009-14.” Thesis Committee Chair.
- 2016 Morgen W.V. Burke, M.S., “Shelterbelt Density Dynamics and their Driving Forces in Grand Forks County, North Dakota, 1962 to 2014.” Thesis Committee Chair.
- 2014 Marla Striped Face-Collins, M.S., “Evaluation of Selected Spectral Vegetation Indices in Senescent Rangeland Canopy using Landsat Imagery.” Thesis Committee Chair.
- 2013 Spencer C. McGrew, M.A., “Exploring the Impact of Zebra Mussels (*Dreissena polymorpha*) on Residential Lakeshore Property Values in Otter Tail and Becker Counties, Minnesota.” Thesis Committee Chair.
- 2012 Nicholas L. Roehrdanz, M.S. “Mapping and Analyzing Conservation Reserve Program Enrollment Patterns From 1991 to 2011 in Nelson County, North Dakota, Using Remote Sensing and GIS Techniques.” Thesis Committee Chair.
- 2010 Peter A. Metzger, M.S. “High-Resolution, Low-Cost, Near-Infrared and Color Kite Aerial Photography as a Tool for Archaeological Site Prospecting and Recording.” Thesis Committee Chair.
- Benjamin L. Prusa, M.S. “Characteristics of Search and Rescue at Mount Rainier National Park.” Thesis Committee Co-Chair (with T. Heggie).
- 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.
- 2008 William A. Wetherholt, M.A. “A Survey of Ethics in United States Remote Sensing Education.” Thesis Committee Chair.
- 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.
- 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).
- Kristofor P. Parson, M.S. “Predicting Selenium in Pinto Beans using Linear Regression

- and GIS.” Thesis Committee Co-Chair (with J. Finley).
- 2006 Charles C. Geraci, M.S. “Remote Sensing Assessment of Widespread Saltcedar Infestation and Biological Control in Northwest Nevada.” Thesis Committee Chair.
- 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.
- 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).
- 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.
- 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.
- 2004 David A. Brookman, M.S. “Remote Sensing and Predictive Modeling of Saltcedar (*Tamarix*) in the Northern Great Plains.” Thesis Committee Chair. Geospatial Intelligence Officer.
- 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.
- 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.
- Casey J. Mutzenberger, M.S. “Application of GIS in the Surveying and Management of Piping Plover and Least Tern.” Independent Study Advisor.
- 2002 Nathan F. Smith, M.S. “Imaging Spectrometry to Map Potential Wildfire Fuels in Theodore Roosevelt National Park, North Dakota.” Thesis Committee Chair.
- 2001 Heith M. Dokken, M.A. “Remote Sensing of Marijuana: A Preventative Form of Law Enforcement.” Thesis Committee Chair.

GRADUATE COMMITTEES

• **Completed (13 Ph.D., 38 M.S., 1 M.A., 4 M.E.M.):**

- 2022 Lynda Lafond, Ph.D. Biology
- 2021 Laura Akindo, M.S. Geography
Hussain Almalki, Ph.D. Communication
- 2020 Taylor Holm, M.S. Biology
- 2019 Alexis Archambault, M.S. Geology
Jenna Folluo, M.S. Biology
Neha Patel, M.S. Geography
- 2017 Katie Engelmann, M.S. Geography
Kelsey Forward, M.S. Geology
Andrea Hewitt, M.E.M. Earth System Science and Policy
Courtney Jackson, M.S. Geography
- 2016 Daniel Fasteen, Ph.D. Educational Foundations and Research
Rebecca Kludt, M.S. Biology
- 2015 Gehendra Kharel, Ph.D. Earth System Science and Policy
Qiang Zhou, Ph.D. Earth System Science and Policy
- 2014 Zachary Braun, M.S. Geography
Nicholas Kludt, M.S. Biology
Michael Knudson, M.S. Earth System Science and Policy
Brett Sergenian, M.A. Geography
Jessica Shahan, M.S. Biology
Rick Thalacker, M.S. Geography
- 2013 Matthew Burton-Kelly, Ph.D. Geology
Dustin VanThuyne, M.S. Biology
- 2012 C. Tanner Gue, M.S. Biology
Elizabeth Hagensen, Ph.D. Criminal Justice
Charlotte Klesman, Ph.D. Communications
Emily Knish, M.S. Geography
AnnMarie Krmpotich, M.S. Biology
Jeremy Smith, M.S. Space Studies
Qiang Zhou, M.S. Earth System Science and Policy
- 2011 Amanda Gearhart, Ph.D. Animal and Range Science (North Dakota State University)
Richard Suggs, M.S. Geology

- 2010 Christina Cummings, M.S. Geography
Kyna Hogg, M.S. Biology
Shawn O’Neil, M.E.M. Earth System Science and Policy
Bhanuben Patel, Ph.D. Engineering
Erin Pederson, M.S. Geography
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. 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:**

- Anaí Caparo Bellidó, Ph.D. Earth System Science & Policy
- Cheyenne Munson, Ph.D. Biology

UNDERGRADUATE RESEARCH ADVISED AND/OR FUNDED

- 2017 Amanda Hefner and Noah Irby, Geography majors, “Bakken Oil Shale Play web-enabled GIS.” AmericaView.
- Sami Swartz, Geography and Biology major, “The U.S. geography of Chronic Lymphocytic Leukemia incidence and radon exposure.” North Dakota INBRE.
- 2014 Mitchell Braget, Geography major, “Simulating UAS photography to digitally reconstruct a traffic accident scene using Structure from Motion” (summer funding).

- 2014 Shafiq Khan, Geography major, “Bakken Presents Greater Challenges for Community Development.” Ronald E. McNair Post-baccalaureate Achievement Program.
- 2011 Matthew Fahrenbruch, Geography major, “An Examination of Shifting Economic Conditions and Changing Vulnerabilities in San Juan de Sur, Nicaragua, since the 1992 Tsunami.”
- 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.” U.S. Department of the Interior (academic year and summer funding).

CURRICULUM DEVELOPMENT

- 2012 Rundquist, B.C., P.R. Sethre, and C.R. Enger. *Environmental Remote Sensing Laboratory*

Manual, Seventh Edition. Grand Forks: University of North Dakota, 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.

WORKSHOPS AND INVITED PRESENTATIONS (TEACHING FOCUS)

- 2017 Integrating an Augmented Reality Sandbox with GIS for Education and Outreach, North Dakota GIS Users Conference, Bismarck, ND.
- 2016 New Tool for Teaching about the Geography of the Fur-Trade Era Missouri River Corridor in North Dakota, Invited Presentation, Summer Teacher Institute, North Dakota Geographic Alliance, Mandan, ND.
- 2015 Fundamentals of Remote Sensing, Lecture and Activity, Mayville State University, Mayville, ND.
- Fundamentals of Remote Sensing, Workshop, North Dakota GIS Users Conference, Fargo, ND.
- All Eyes on Geography: The Increasing Importance of Geography Education in a Geo-Enabled World, Invited Presentation, Summer Teacher Institute, North Dakota Geographic Alliance, Fargo, ND.
- Introduction to Digital Image Processing: Selected Techniques and Software, Guest Lecture in Space Studies 522: Remote Sensing Principles.
- 2013 Remote Sensing for Land Cover Mapping, Guest Lecture in Arts and Sciences 299: Special Topics, University of North Dakota.
- 2012 Proximal Remote Sensing and Landsat Overview, Guest Lecture in Aviation 333: UAS Remote Sensing, University of North Dakota.
- 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

EXPERTISE

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

REFEREED PAPERS (BOLD = Student Researcher)

- 2021 **Caparó Bellido, A.**, and B.C. Rundquist. Semi-Automatic Fractional Snow Cover Monitoring from Near-Surface Remote Sensing in Grassland. *Remote Sensing*. 13: 2045.
- Burke, M.W.V.**, and B.C. Rundquist. Scaling Phenocam GCC, NDVI, and EVI2 with Harmonized Landsat-Sentinel using Gaussian Processes. *Agricultural and Forest Meteorology* 300, 108316.
- 2019 **Amor, J.M.**, R. Newman, W.F. Jensen, B.C. Rundquist, W.D. Walter, J.R. and Boulanger. Seasonal home ranges and habitat selection of three elk (*Cervus elaphus*) herds in North Dakota. *PLOS One* 14(2): e0211650.
- Burke, M.W.V.**, B.C Rundquist, and H. Zheng. Detection of shelterbelt change using historic APFO and NAIP aerial imagery. *Remote Sensing* 11(3): 218.
- Schwartz, G.G., M.G. Klug, and B.C. Rundquist. 2019. An exploration of colorectal cancer incidence rates in North Dakota, USA, via structural equation modeling. *International Journal of Colorectal Disease* 34(9):1,571-1,576.
- Zhou, Q., J. Rover, J. Brown, B. Worstell, D. Howard, Z. Wu, A. Gallant, B. Rundquist, and **M. Burke**. Monitoring grassland dynamics in central U.S. grasslands with harmonized Landsat 8 and Sentinel 2 data. *Remote Sensing* 11(3): 328.
- 2017 **Burow, D.**, B.C. Rundquist, C. Atkinson. NDVI change analysis and damage mapping of the Vilonia, Arkansas tornado, 27 April 2014. *Papers in Applied Geography* 3(1):85-100.

- Kludt, N.B.**, S.W. Kelsch, R.A. Newman, and B.C. Rundquist. Riparian and landscape disturbance effects on stream fish community composition in an agriculturally-dominated drainage. *Aquatic Ecosystem Health & Management*. 20(4):445-456.
- Oancea, S.C., B.C. Rundquist, **I.J. Simon**, **S.E. Swartz**, Y. Zheng, X. Zhou, M.A. Sens, and G.G. Schwartz. County level incidence rates of chronic lymphocytic leukemia are associated with residential radon levels. *Future Oncology* 13(21):1573-1581.
- Shahan, J.L.**, B.J. Goodwin, and B.C. Rundquist. Grassland songbird occurrence on remnant prairie patches is primarily determined by landscape characteristics. *Landscape Ecology*. 32(5):971-988.
- 2016 Phillips, R.L., M.R. Eken, and B.C. Rundquist. A topographic framework for estimating spatial variation in grassland structure for hill country landscapes. *Hill Country Symposium – Grassland Research and Practice Series*. 16:119-126.
- Schwartz, G.G., B.C. Rundquist, **I.J. Simon**, and **S.E. Swartz**. Geographic distributions of motor neuron disease mortality and well water use in U.S. counties. *Amyotrophic Lateral Sclerosis and Frontotemporal Degeneration*. 18(3-4):279-283.
- 2013 Phillips, R., M. West, N. Saliendra, B. Rundquist, and D. Pool. Prediction of senescent rangeland canopy structural attributes with airborne hyperspectral imagery. *GIScience & Remote Sensing*. 50(2):133-153.
- Rundquist, B.C, and G.S. Vandeberg. Fully engaging students in the remote sensing process through field experience. *Journal of Geography* 112(6):262-270.
- 2012 **Cummings, C.A.**, P.E. Todhunter, and B.C. Rundquist. Using the HAZUS-MH Flood Model to evaluate community relocation as a flood mitigation response to terminal lake flooding: The case of Minnewaukan, North Dakota, USA. *Applied Geography* 32:889-895.
- 2010 Rundquist, B.C. Unsupervised classification, in: *Encyclopedia of Geography*, ed. B. Warf, pp. 2914-2915. Thousand Oaks, CA: SAGE Publications, Inc.
- 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.
- 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.

REFEREED BOOK CHAPTERS

- 2020 Rundquist, B., and G. Vandeberg. The Geographic Setting of the Bakken Oil Shale Play. In *Sixty Years of Boom and Bust: The Impact of Oil in North Dakota: 1958-2018*, ed. K. Conway. Grand Forks, ND: Digital Press@UND.
- 2019 Jacobs, M., B. Rundquist, and K. Bauer. Reading North Dakota's Contemporary Landscapes: Stories of Devolution, Dereliction, Dynamism, and Curation. In *Handbook of the Changing World Language Map*, ed. S.D. Brunn and R. Kehrein. Cham, Switzerland: Springer.
- 2015 Rundquist, B.C., and S.D. Brunn. Geographic support for the ordination of same sex clergy by American Lutheran and Presbyterian denominations. In *The Changing World Religion Map: Sacred Places, Identities, Practices, and Politics*, ed. S.D. Brunn. Berlin: Springer.

Rundquist, B.C. The effects of climatic factors on vegetation dynamics across homogeneous land cover. In *Selected Readings in Applied Climatology*, ed. R.V. Rohli and T.A. Joyner. Newcastle: Cambridge Scholars Publishing.

Tao, Y., Z. Chi, J. Harrington, Jr., B. Rundquist, and M.D. Nellis. Analysis of the relationship between NDVI and rainfall in subhumid agricultural areas and the influence of environmental factors. In *Selected Readings in Applied Climatology*, ed. R.V. Rohli and T.A. Joyner. Newcastle: Cambridge Scholars Publishing.

- 2013 Rundquist, B.C., and P.E. Todhunter. Remote sensing assesses flooding at Devils Lake, North Dakota. In *Meeting Environmental Challenges with Remote Sensing Imagery*, ed. R.L. Dodge and R.S. Congalton. Alexandria, VA: American Geosciences Institute. pp. 70-71.

DATA SETS

- 2020 PhenoCam Dataset v2.0: Vegetation Phenology from Digital Camera Imagery, 2000-2018. ORNL DAAC, Oak Ridge, TN. <https://doi.org/10.3334/ORNLDAAAC/1674>

NON-REFEREED PAPERS AND PUBLISHED ABSTRACTS (**BOLD** = Student Researcher)

- 2016 Schwartz, G.G., M.G. Klug, **I.J. Simon, S.E. Swartz**, and B.C. Rundquist. Mortality rates for motor neuron disease at the state and county levels in the U.S. are associated with the use of well water. *F1000Research*, 5:2,792.
- 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** = Student Researcher)

- 2023 **Ara Z.**, and B.C. Rundquist. County and township level change analysis of crop diversity in the Red River Valley, North Dakota. American Association of Geographers, Denver, CO.
- Caparó Bellido, A.**, and B.C. Rundquist. Near-surface remote sensing to estimate fractional snow cover in grasslands. American Association of Geographers, Denver, CO.
- 2021 **Patel, N.N.**, G.S. Vandenberg, and B.C. Rundquist. Use of Landsat satellite imagery to identify the salinization of soil due to brine spills in Northwestern North Dakota. American Association of Geographers, Virtual Conference.
- 2018 Todhunter, P., D. Flynn, B. Rundquist, G. Vandenberg, and E. Wang. Long-term flood recovery at Grand Forks, North Dakota: Which recovery sector? When recovered? Why recovered? American Association of Geographers, New Orleans, LA.

- 2017 **Amor, J.**, B. Rundquist, W. Jensen, G. Vandeberg, R. Newman, and J. Boulanger. An evaluation of elk home range variation in North Dakota. Society for Conservation GIS Conference, Monterey, CA.
- Rundquist, B.C., **N.R. Irby**, **A.M. Hefner**, M.A. Niedzielski, and **M.W.V. Burke**. A geography of oil spills in North Dakota, 2014-2016. Great Plains/Rocky Mountain Division of the Association of American Geographers, Grand Forks, ND.
- Todhunter, P., D. Flynn, B. Rundquist, G. Vandeberg, and E. Wang. Why Grand Forks recovered so effectively from the 1997 Flood Disaster: Multi-layered recovery, basic principles, and unique particulars. Great Plains/Rocky Mountain Division of the Association of American Geographers, Grand Forks, ND.
- 2016 **Burke, M.W.V.**, B.C. Rundquist, P.E. Todhunter, and B.J. Goodwin. Shelterbelt density dynamics and their driving forces in Grand Forks County, North Dakota, 1962 to 2014. Association of American Geographers, San Francisco, CA.
- Burow, D.**, B.C. Rundquist, and C. Atkinson. NDVI climate analysis and damage mapping of the Vilonia, Arkansas, tornado, 27 April 2014. Applied Geography Conference, Louisville, KY.
- Steuck, M., J. Brown, D. Howard, and B. Rundquist. Evaluation of the impacts of snow, clouds, and poor quality input data on land surface phenology metrics. American Geophysical Union, San Francisco, CA.
- 2015 Rundquist, B.C., and B.J. Goodwin. Recent changes in crop diversity in the Red River of the North Valley, North Dakota and Minnesota. Association of American Geographers, Chicago, IL.
- 2013 Rundquist, B.C. and **N.L. Roehrdanz**. Mapping and analyzing Conservation Reserve Program enrollment patterns from 1991 to 2011 in Nelson County, North Dakota, using remote sensing and GIS techniques. American Society for Photogrammetry and Remote Sensing Annual Conference, Baltimore, MD.
- Rundquist, B.C. and **N.L. Roehrdanz**. Mapping changes in Conservation Reserve Program enrollment associated with pervasive flooding between 1991 and 2011 in Nelson County, North Dakota, using multi-seasonal Thematic Mapper imagery. Association of American Geographers, Los Angeles, CA.
- 2012 Phillips, R., M. West, N. Saliendra, A. Tollefsrud, and B. Rundquist. Remote sensing techniques for habitat and biofuel assessment in the Northern Great Plains. Central Mountains and Plains Division of the Wildlife Society, Mandan, ND.
- Roehrdanz, N.L.**, and B.C. Rundquist. Mapping and analyzing Conservation Reserve Program enrollment patterns from 1991 to 2011 in Nelson County, North Dakota, using remote sensing and GIS techniques. AmericaView Fall Technical Meeting, Sioux Falls,

SD.

Shahan, J., B. Goodwin, and B. Rundquist. Identifying landscape-level patterns in grassland songbird communities. UND Graduate School Scholarly Forum, Grand Forks, ND.

- 2011 **Dvorak, D.R.**, W.H. Semke, and B.C. Rundquist. Using an unmanned aircraft to collect multispectral imagery during a Landsat 5 pass and comparing the results to a ground-based multispectral radiometer. North Dakota GIS Users Conference, Grand Forks, ND.

Fahrenbruch, M.L., and B.C. Rundquist. An examination of shifting economic conditions and changing vulnerabilities in San Juan del Sur, Nicaragua, since the 1992 tsunami. South Dakota State University, 42nd Annual Geography Convention, Brookings, SD.

VanThuyne, D.J., C.S. Dixon, B.C. Rundquist, B.J. Goodwin, K.A. Yurkonis, K.R. Mehl, and M.A. Ahlering. The influence of the surrounding landscape on grassland songbird diversity in the Devils Lake and Arrowwood Wetland Management Districts. Annual Meeting of the North Dakota Chapter of The Wildlife Society, Minot, ND.

- 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.

Metzger, P.A., B.C. Rundquist, and **K.L. Wikstrom**. Object-based land cover mapping of eastern North Dakota bird survey routes using high-resolution LiDAR and multispectral aerial imagery. Great Plains/Rocky Mountain Division of the Association of American Geographers, Lawrence, KS.

- 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.

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

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. Vandeberg, 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** = Student Researcher)

- 2021 **Kantonen, L.M., M.W.V. Burke**, B.C. Rundquist, R.A. Newman and K.A. Yurkonis. Tracking grassland plant phenophases using near-surface remote sensing at a northern tall grass prairie. Ecological Society of America Annual Meeting, Virtual Conference.
- 2019 **Beckert, H.**, I. Alshalan, J. Kolar, B. Rundquist, and J. Boulanger. Historical greater-sage-grouse population densities in southwest, North Dakota. North Dakota Chapter of the Wildlife Society Annual Meeting, Mandan, ND.
- 2018 **Patel, N.N.**, G.S. Vandeberg, and B.C. Rundquist. Understanding and measuring anthropogenic soil salinity in brine spill-impacted farmlands of Bottineau County, North Dakota, using multi-temporal Landsat data. Association of American Geographers, New Orleans, LA.
- 2017 **Amor, J.M.**, J.R. Boulanger, B.C. Rundquist, and W. Jensen. An evaluation of elk movements in North Dakota. Annual Meeting of the North Dakota Chapter of the Wildlife Society, Mandan, ND.
- Hefner, A.M., N.R. Irby**, B.C. Rundquist, M.A. Niedzielski, and **M.V.W. Burke**. Characteristics and geography of oil spills in western North Dakota, 2014-2016. Association of American Geographers, Boston, MA.
- Patel, N.N.**, G.S. Vandeberg, and B.C. Rundquist. Multitemporal Landsat data analysis of brine spill impacted farmlands in Bottineau County, North Dakota. North Dakota GIS

Users Conference, Bismarck, ND.

Patel, N.N., G.S. Vandenberg, and B.C. Rundquist. Understanding and measuring anthropogenic soil salinity in brine spill-impacted farmlands of Bottineau County, North Dakota, using multi-temporal Landsat data. Great Plains/Rocky Mountain Division of the Association of American Geographers, Grand Forks, ND.

Rundquist, B., and **M. Burke**. Mapping and monitoring shelterbelt dynamics in the Red River of the North Valley using NAIP. Pecora Symposium 20, American Society for Photogrammetry & Remote Sensing, Sioux Falls, SD.

2016 **Amor, J.M.**, W. Jensen, B. Rundquist, and J.R. Boulanger. An evaluation of elk movements in the Northern Great Plains. The Wildlife Society Annual Conference, Raleigh, NC.

Klug, E.L., and B.C. Rundquist. Census of shelterbelts in Walsh County, North Dakota, using digital aerial photography and light detection and ranging (lidar). North Dakota EPSCoR/IDeA Conference, Grand Forks, ND.

Oancea, S.C., B.C. Rundquist, **I.J. Simon**, **S.E. Swartz**, Y. Zheng, X. Zhou, M.A. Sens, G.G. Schwartz. The geospatial association between chronic lymphocytic leukemia and residential radon in three U.S. states. American Public Health Association Meeting and Expo, Denver, CO.

Simon, I.J., **S.E. Swartz**, B.C., Rundquist, G.G. Schwartz, S.C. Oancea, Y. Zheng, X. Zhou, and M.A. Sens. The geographic correlation between chronic lymphocytic leukemia and residential radon incidence in North Dakota, Wisconsin, and Texas. Frank Low Research Day, School of Medicine and Health Sciences, University of North Dakota, Grand Forks, ND.

Schwartz, G.G., M.G. Klug, **I.J. Simon**, **S.E. Swartz**, and B.C. Rundquist. Mortality rates for motor neuron disease at the state and county levels in the U.S. are associated with the use of well water. International Symposium on ALS/MND, Dublin, Ireland.

2015 **Burke, M.W.V.**, B.C. Rundquist, **Klug, E.L.**, **L.L. Burkett**, **M.P. Braget**, and B.J. Goodwin. Integration of ground-level and satellite data for monitoring vegetation phenology at the Oakville Prairie. Great Plains/Rocky Mountain Division of the Association of American Geographers, Kearney, NE.

Burke, M.W.V., and B.C. Rundquist. Shelterbelt density dynamics and their driving forces in Grand Forks County, North Dakota, 1962 to 2014. North Dakota GIS Users Conference, Fargo, ND.

Klug, E.L., **M.W.V. Burke**, B.C. Rundquist, **L.L. Burkett**, **M.P. Braget**, and B.J. Goodwin. Integration of ground-level and satellite data for monitoring vegetation phenology at the Oakville Prairie. North Dakota GIS Users Conference, Fargo, ND.

Rundquist, B.C., M.A. Niedzielski, **M.R. Quinlan, D.J. Skogen, M.W.V. Burke, M.P. Braget, A.R. Braget, and B.C. York.** Web-enabled GIS for Bakken oil boom data with a Focus on the Fort Berthold Reservation. North Dakota GIS Users Conference, Fargo, ND.

Simon, I.J., B.C. Rundquist, and T.M Reese. Web-enabled GIS of North Dakota's Fur Trade-era Missouri River Corridor. North Dakota GIS Users Conference, Fargo, ND.

Braget, M.P., B.C. Rundquist, and E.S. Plummer. Simulating UAS photography to digitally reconstruct a traffic accident scene using Structure from Motion. Association of American Geographers, Chicago, IL.

Quinlan, M., A. Braget, M. Braget, M. Burke, D. Skogen, B. Rundquist, M. Niedzielski, and S. Braun. Development of a web-based GIS to support decision-making on the Fort Berthold Reservation, North Dakota. Association of American Geographers, Chicago, IL.

M.A. Niedzielski, Rundquist, B., and T. Carmichael. Mapping and interpreting North Dakota in celebration of 125 Years of statehood: Engaged citizenship and collaborative learning. North Dakota Legislative Showcase, Bismarck, ND.

Rundquist, B., M. Niedzielski, and S. Braun. Development of North Dakota Viewer for Bakken oil data with a focus on the Fort Berthold Reservation. AmericaView Winter Business Meeting, USGS Headquarters, Reston, VA.

- 2014 Rundquist, B., **M. Ingham,** and M. Fisher. Detecting trends in invasive emergent vegetation in the Devils Lake Basin of North Dakota. Association of American Geographers, Tampa, FL.
- 2013 **Ingham, M.,** M. Fisher, and B. Rundquist. Using remote sensing data analysis techniques to distinguish emergent wetland vegetation trends in the Devils Lake Wetland Management District of North Dakota. Annual Meeting of the North Dakota Chapter of the Wildlife Society, Mandan, ND.
- Rundquist, B.C., and B.J. Goodwin. The impacts of landscape change on grassland bird population trends in North Dakota. Great Plains/Rocky Mountain Division of the Association of American Geographers, Omaha, NE.
- Thalacker, R.J., M.D. Knudson,** W.F. Jensen, and B.C. Rundquist. Measuring juniper expansion in the North Dakota Badlands using Aerial Photos. Annual Meeting of the North Dakota Chapter of the Wildlife Society, Mandan, ND.
- Thalacker, R.J., M.D. Knudson,** W.F. Jensen, and B.C. Rundquist. Measuring juniper expansion in the North Dakota Badlands using Aerial Photos. North Dakota GIS Users Conference, Grand Forks, ND.
- 2012 **Gue, C.T.,** J. Walker, K.R. Mehl, J.S. Gleason, S.E. Stephens, C.R. Loesch, R.E.

Reynolds, B.J. Goodwin, and B.C. Rundquist. Home ranges and nest locations of upland nesting ducks at a large-scale wind farm in the Prairie Pothole Region. North American Duck Symposium, Memphis, TN.

Roehrdanz, N.L., and B.C. Rundquist. Analysis of the influences driving Conservation Reserve Program (CRP) enrollment patterns in the Devils Lake Basin, North Dakota. Association of American Geographers, New York, NY.

- 2011 **Shahan, J.**, B. Goodwin, and B. Rundquist. Identifying landscape-level patterns in grassland songbird community richness and diversity. North Dakota GIS Users Conference, Grand Forks, ND.

Roehrdanz, N.L., and B.C. Rundquist. Analysis of the influences driving Conservation Reserve Program (CRP) enrollment patterns in the Devils Lake Basin, North Dakota. Great Plains/Rocky Mountain Division of the Association of American Geographers, Denver, CO.

Anderson, N., and B.C. Rundquist. Analysis of temporal changes in canopy structure to determine temperate species invasion of the boreal wilderness of northwest Minnesota. Great Plains/Rocky Mountain Division of the Association of American Geographers, Denver, CO.

Fahrenbruch, M.L., and B.C. Rundquist. An examination of shifting economic conditions and changing vulnerabilities in San Juan del Sur, Nicaragua, since the 1992 tsunami. UND Graduate School Scholarly Forum, Grand Forks, ND.

Rundquist, B.C., and **P.A. Metzger**. Object-based land cover mapping of eastern North Dakota Breeding Bird Survey Routes, Association of American Geographers, Seattle, WA.

- 2010 **Fahrenbruch, M.L.** and B.C. Rundquist. Using remote sensing to estimate common tansy distribution: Woodside Prairie Restoration Site, Minnesota. Great Plains/Rocky Mountain Division of the Association of American Geographers, Lawrence, KS.

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. 4th 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). 27th 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 10th 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, New York, NY.
- 1999 Hutchinson, J.M.S., and B.C. Rundquist. Spatial modeling of net radiation over heterogeneous terrain. Association of American Geographers, 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, 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 15th Annual Conference, Manhattan, KS.

PANEL DISCUSSIONS

- 2011 Challenges and Accomplishments of Master's Granting Institutions, Association of American Geographers, Seattle, WA.
- 2010 Journal Editors' Panel on Publishing, AmericaView Fall Technical Meeting, Madison, WI (recorded comments only).
- 2004 Strategies for Strong Consortium Partnerships, AmericaView Fall Technical Meeting, Sioux Falls, SD.

INVITED PRESENTATIONS (RESEARCH FOCUS)

- 2015 North Dakota View, American Society for Photogrammetry and Remote Sensing, Western Great Lakes Region, Frozen UAS Tour 2015, East Grand Forks, MN.
- 2013 Drivers of Change in Conservation Land Covers in Nelson County, ND, 1991-2011, Department of Biology Forum, University of North Dakota.
- 2010 Remote Detection of Invasive Plant Species, South Dakota State University, 41st 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.

GRANTS, CONTRACTS, AWARDS, AND FELLOWSHIPS (*Total Dollars: \$1,769,386*)

- 2022 **North Dakota View**, U.S. Geological Survey and AmericaView Inc., \$23,500 (PI).
- 2021 **North Dakota View**, U.S. Geological Survey and AmericaView Inc., \$23,500 (PI).
- 2020 **North Dakota View**, U.S. Geological Survey and AmericaView Inc., \$23,500 (PI).
- 2019 **North Dakota View**, U.S. Geological Survey and AmericaView Inc., \$23,500 (PI).
- 2018 **North Dakota View**, U.S. Geological Survey and AmericaView Inc., \$23,500 (PI).
- 2017 **The North Dakota Anthropocene: Phase II**, UND Arts and Humanities Scholarship Initiative, \$20,350 (co-PI with T. Reese).
- 2016 **The U.S. Geography of Chronic Lymphocytic Leukemia Incidence and Radon Exposure**, North Dakota IDeA Networks of Biomedical Research Excellence (INBRE), \$21,190 (second-year funding) (co-PI with S. Cristina Oancea and G. Schwartz).
- 2015 **The U.S. Geography of Chronic Lymphocytic Leukemia Incidence and Radon Exposure**, North Dakota IDeA Networks of Biomedical Research Excellence (INBRE), \$21,190 (first-year funding) (co-PI with S. Cristina Oancea and G. Schwartz).
- North Dakota View**, U.S. Geological Survey and AmericaView Inc., \$23,500 (PI and Consortium Director).
- ND@125 Online Atlas Project**. UND College of Arts and Sciences, \$28,500 (supporting role, PI is M. Niedzielski).
- Monitoring Phenology in the North Central Region of the U.S.**, U.S. Department of the Interior, North Central Climate Science Center, \$4,850 (second follow-on funding to 2013 grant) (PI).
- The North Dakota Anthropocene: Phase I**, UND Arts and Humanities Scholarship Initiative, \$28,594 (co-PI with T. Reese and S. Braun).
- Monitoring Phenology in the North Central Region of the U.S.**, U.S. Department of the Interior, North Central Climate Science Center, \$3,600 (first follow-on funding to 2013 grant) (PI).
- Travel to Chicago; April 21-25, 2015**, Senate Scholarly Activities Committee Travel Award, University of North Dakota Office of Research and Program Development, \$447.
- 2014 **North Dakota View**, U.S. Geological Survey and AmericaView Inc., \$24,900 (PI and Consortium Director).

Developing Unmanned Aircraft Systems (UAS) for Law Enforcement, UND Office of the Vice President for Research Seed Award, \$2,880.

Spatial Problem Solvers: Enhancing Student Analytical Proficiency through Problem-Based Learning, Summer Instructional Development Project Cluster grant, UND Office of Instructional Development, \$12,000 (with M. Niedzielski and C. Atkinson).

Travel to Tampa; April 8-12, 2014, Senate Scholarly Activities Committee Travel Award, University of North Dakota Office of Research and Program Development, \$301.

2013 **Developing Unmanned Aircraft Systems (UAS) for Wildlife Ecology Studies at UND**, UND Office of the Vice President for Research Seed Award, \$40,000 (co-PI with B. Newman, W. Semke, S. Felege, T. Desell, and M. Cocoran).

North Dakota View, U.S. Geological Survey and AmericaView Inc., \$24,673 (PI and Consortium Director).

Monitoring Phenology in the North Central Region of the U.S., U.S. Department of the Interior, North Central Climate Science Center, \$4,000 (one of 6 co-PIs; each co-PI was awarded \$4,000).

Remote Assessment of Senescent Grassland Landscapes, U.S. Department of Agriculture, Agricultural Research Service, Cooperative Agreement, \$51,500 (PI).

Travel to Los Angeles; April 7-12, 2013, Senate Scholarly Activities Committee Travel Award, University of North Dakota Office of Research and Program Development, \$301.

Replacement Computers and Plotter for the Geographic Analysis and Remote Sensing Lab (GARSL), Student Technology Fee Award, University of North Dakota, \$56,631 (with G. Vandeberg).

2012 **The Impacts of Climate Change, Landscape Change and Weather on Bird Population Trends**, North Dakota EPSCoR, \$40,000 (co-PI with B. Goodwin).

Detecting Trends in Invasive Emergent Vegetation within the U.S. Fish and Wildlife Service's Devils Lake Wetland Management District of North Dakota using Remote Sensing, U.S. Fish and Wildlife Service, \$20,000 (PI).

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

Travel to New York City; February 21-26, 2012, Senate Scholarly Activities Committee Travel Award, University of North Dakota Office of Research and Program Development, \$302.

2011 **North Dakota View**, U.S. Geological Survey and AmericaView Inc., \$23,800 (PI and Consortium Director).

Travel to Seattle; April 12-16, 2011, Senate Scholarly Activities Committee Travel Award, University of North Dakota Office of Research and Program Development, \$350.

2010 **North Dakota View**, U.S. Geological Survey and AmericaView Inc., \$24,000 (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-
Impact factors: 0.575 in 2012, 0.897 in 2013, 1.370 in 2014, 1.450 in 2015, 1.646 in 2016, 1.759 in 2017, 2.365 in 2018, 3.789 in 2019, 4.889 in 2020
- Book Review Editor, *Photogrammetric Engineering & Remote Sensing*, 2007-2010

• Offices in Professional Associations/Honor Societies:

- Regional Councillor, Great Plains/Rocky Mountain Division, Association of American Geographers, 2011-2014 (Regional Councillor Chair, 2012-2014)

- Member, Membership Committee, Association of American Geographers, 2012-2014.
- Past President (2013-2014), President (2012-2013), and Vice President (2011-2012), St. Louis Region, American Society for Photogrammetry and Remote Sensing
- 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*
- *Annals of the Association of American Geographers* (March 2011)
- *Geocarto International* (x3)
- *Hydrology and Earth System Sciences Discussions*
- *International Journal of Remote Sensing* (x2) (May 2012)
- *Israel Journal of Plant Science* (August 2011)
- *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 18th North American Prairie Conference*
- *Rangeland Ecology and Management*
- *Remote Sensing of Environment* (x2)
- U.S. Department of Agriculture, Agricultural Research Service (x2) (Northern Great Plains Research Laboratory in August 2011, Eastern Oregon Agricultural Research Center in May 2012)
- *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:**

- Roskin, Michael G. 2015. *Countries and Concepts: Politics, Geography, Culture*, San Francisco: Pearson (online interactive text).

- Gervais, Bruce. 2015. *Living Physical Geography*, New York, NY: W.H. Freeman and Company/MacMillan Education.
- *Physical Geography Lab Manual: A Google Earth Approach*. Hoboken, NJ: John Wiley and Sons.
- 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 2009-2015)
- 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, Earth Sciences Division (x2)
- NSF Research Experiences for Undergraduates (2011, 2013, 2014)
- NSF International Research Experiences for Students (2011)
- 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, 2017, Bismarck, ND, planning committee member.
- North Dakota University System Fine Arts & Humanities Summit, 2016, Grand Forks, ND, organizing committee member with William Caraher, UND History, and Donovan Widmer, UND Art & Design (115 registrants, 18 oral presentations, 1 performance, several 45 exhibits).
- North Dakota GIS Users Conference, 2015, Fargo, ND, planning committee member.
- North Dakota GIS Users Conference, Sept. 10-12, 2013, Grand Forks, ND, co-organizer with Ann Fritz, State of North Dakota Department of Health (196 participants, 19 exhibitors, 4 workshops, 42 oral presentations, 22 posters)
- 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, Student Poster Competition, Great Plains/Rocky Mountain Division, Association of American Geographers, Grand Forks, ND, 2017
- Chair, Environmental Geography II Session, Great Plains/Rocky Mountain Division, Association of American Geographers, Grand Forks, ND, 2017
- Judge, Master's Student Paper Competition, Great Plains/Rocky Mountain Division, Association of American Geographers, Omaha, NE, 2013
- Chair, Master's Student Paper Competition, Great Plains/Rocky Mountain Division, Association of American Geographers, Omaha, NE, 2013
- Moderator, Geography, Earth System Science and Policy, and Atmospheric Sciences Session, UND Graduate School Scholarly Forum, Grand Forks, ND, 2012
- Moderator, Remote Sensing Session, North Dakota GIS Users Conference, Grand Forks, ND, 2011
- Judge, Student Paper Competition, Great Plains/Rocky Mountain Division, Association of American Geographers, Denver, CO, 2011
- Chair, Student Paper Competition I, Great Plains/Rocky Mountain Division, Association of American Geographers, Denver, CO, 2011
- 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:**

- External reviewer, promotion to professor, Department of Water Management and Environment, The Hashemite University, Zarqa, Jordan, Spring 2021.

- External reviewer, promotion to professor, School of Natural Resources, University of Nebraska-Lincoln, Fall 2017.
- External reviewer, promotion to professor, Department of Geography, South Dakota State University, Fall 2017.
- External reviewer, promotion to professor, Department of Mathematics & Statistics, South Dakota State University, Fall 2017.
- External reviewer, promotion to professor, Department of Geography, Geology, and Planning, Missouri State University, Fall 2017.
- External reviewer, promotion to professor, Department of Geography, South Dakota State University, Fall 2015.
- External reviewer, promotion to professor, Department of Geography and Environmental Science, University of Colorado - Colorado Springs, Fall 2015.
- Judge, Earth Sciences, North Dakota State Science and Engineering Fair, 2013
- Judge, Arts, Humanities, and Social Sciences, North Dakota State Science and Engineering Fair, 2012
- National Phenology Network Observer (lilacs on the UND campus), 2010-
- ASPRS Member Champion, 2014, 2012, 2010, and 2008

UNIVERSITY SERVICE

- Essential Studies Committee, University Senate, University of North Dakota, 2020-2022; 2023 -
- Administrative Procedures Committee, University Senate, University of North Dakota, 2019-
- University Senate, University of North Dakota, 2018-
- Associate Deans for Research Committee, Vice President for Research, University of North Dakota, 2015-2018
- Biological Field Station Committee, Vice President for Research, University of North Dakota, 2015-2018
- Dakota Student Advisory Board, University of North Dakota, 2015-2018
- Unmanned Aerial Systems Advisory Board, Vice President for Academic Affairs, University of North Dakota, 2015-2016
- Faculty Research Seed Money, Social Sciences Sub-Committee, University of North Dakota, 2015-2016
- Athletics Academic Services External Evaluation Committee, University of North Dakota, Fall 2015.
- Promotion Committee member, Anthropology Department, University of North Dakota, 2014
- Search Committee member, TRIO Program Director, Division of Student Affairs, University of North Dakota, 2014
- College of Arts and Sciences Budget Committee, University of North Dakota, 2013-2014
- Graduate Program Evaluation for Teaching and Learning Education: General Studies, University of North Dakota, 2012-2013
- Undergraduate Program Evaluation for Communications, University of North Dakota, 2010-2011 (chair, authored the report)
- College of Arts and Sciences Council, University of North Dakota, 2008-
- 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; 2011-2012
- Mentor, Alice T. Clark/UND Foundation Scholars Mentoring Program, 2007-2009; 2010-2012
- 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, 2015
- 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

- Coordinator, Forum for Contemporary Geographic Issues, 2012-2016
- Chair, Non-Tenure-Track On-Line Position Search Committee, 2010-2011
- 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

- Facilitated several *ad-hoc* internship opportunities for students with local government and private firms, 2000-
- Coordinated a two-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)

2011 UND Department of Geography, North Dakota GIS Users Conference, Grand Forks, ND, 2011.

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.

OTHER

AWARDS, HONORS, AND HONOR SOCIETIES

- Martin Luther King Jr. 2022 Social Justice Award, University of North Dakota.
- Affiliate Fellow, Center for Great Plains Studies, University of Nebraska-Lincoln, 2019.
- Exceptional Service Honor as Regional Councillor Chair, Association of American Geographers, 2014
- 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 DEVELOPMENT

- Association of American Geographers Department Leadership Workshop, July 17-19 2010, Boulder, CO.

PROFESSIONAL SOCIETY MEMBERSHIPS

- American Society for Photogrammetry and Remote Sensing (ASPRS), 1996-present
- Association of American Geographers (AAG), 1993-present