

RICK L. BUNCH
Curriculum Vitae - September 2011

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Department of Geography
University of North Carolina Greensboro

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Education

Ph.D. (2000)	University of South Carolina	Geography
M.S. (1998)	University of South Carolina	Geography
B.S. (1996)	The Ohio State University	Geography

Primary Research Interests

Geographic Information Science/Spatial Cognition/Geographic Education

Appointments

University of North Carolina Greensboro, Department of Geography

2007 - Present	Associate Professor
2006 - Present	Director, Center for Geographic Information Science
2004 - 2007	Assistant Professor

Central Michigan University, Department of Geography

2002 - 2004	Assistant Professor and Director, Center for Geographic Information Science
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Southern Illinois University Edwardsville, Department of Geography

2001 - 2002	Assistant Professor
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University of Minnesota Minneapolis, Department of Geography

2000 - 2001	Visiting Assistant Professor
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Research

Refereed Publications

- Ackerman, W., and Bunch, R. In Press. "A Comparative Analysis of Indian Gaming in the United States," *Indian Gaming Quarterly*.
- Bunch, R., Tapp, A., Pathak, P. 2011. "Leveraging the Science of Geographic Information Systems," *International Journal of Applied Geospatial Research*. 2: 33-38.
- Lloyd, R., and Bunch, R. 2010. "Learning Geographic Information from a Map and Text: Learning Environment and Individual Differences," *Cartographica*. 45: 169-184.
- Long, M., Bunch, R., and Lloyd, R. 2010. "Anti-Americanism, Political Cartoons and a Socio-Geographic Imagination: An Invitation for Further Work," *Sociological Inquiry*. 80: 650-660.
- Rychtar, J., Jones, E., and Bunch, R., and Gove, R 2010. "Calculating Edge Length Bias and the Relative Size of a 'Neighborhood' in Spatial Social Networks," *Far East Journal of Applied Mathematics*. 39: 53-69.
- Long, M., Bunch, R., and Lloyd, R. 2009. "Measuring Anti-Americanism in Editorial Cartoons," *Social Science Quarterly*. 90: 652 - 673.
- Bunch, R., Nelson, E., Lloyd, R., Kane, M., and Tricot, T. 2008. "Instructional Geographic Information Science: A Multidisciplinary Framework for Geospatial Technologies in Education," In A. Milson and M. Alibrandi (Eds), *Digital Geography: Geo-spatial Technologies in the Social Studies Classroom*. Greenwich, CT: Information Age Publishing, 227 - 245.
- Lloyd, R., and Bunch, R. 2008. "Explaining Map-Reading Performance Efficiency: Gender, Memory, and Geographic Information," *Cartography and Geographic Information Science*. 35: 171 - 202.
- Tapp, A., and Bunch, R. 2008. "Mapping the Invisible World: Modeling Wireless Communications with Geographic Information Systems," *American Congress on Surveying and Mapping*. 232: 14 - 17.
- Bunch, R., and Lloyd, R. 2006. "The Cognitive Load of Geographic Information," *The Professional Geographer*. 58: 209 - 220.
- Walker, S., Bunch, R., Muñiz, O., Murr, C., Qiu, X., Rockey Moore, M., Warren, M., and Wridt, P. 2005. "Cognition and Learning in Geographic Education: A Research Agenda," *Research in Geographic Education*. 7: 21 - 31.

- Lloyd, R., and Bunch, R. 2005. "Individual Differences in Map Reading Spatial Abilities Using Perceptual and Memory Processes," *Cartography and Geographic Information Science*. 32: 33 - 46.
- Milson, A., DeChano, L., Bunch, R., Caito, J., and Qui, X. 2005. "GIS in K-12 Education: Pedagogical Tool or Weapon of Mass Distraction?," *Research in Geographic Education*. 7: 62 - 73.
- Lloyd, R., and Bunch, R. 2003. "Technology and Map Learning: Users, Methods, and Symbols," *Annals of the Association of American Geographers*. 93: 828 - 850.
- Bunch, R., and Lloyd, R. 2002. "Are Sex Differences Important for Complex Spatial Tasks?," *Research in Geographic Education*. 4: 43 - 62.
- Bunch, R., and Lloyd, R. 2000. "The Search for Boundaries on Maps: Color Processing and Map Pattern Effects," *Cartography and Geographic Information Science*. 27: 15 - 29.
- Bunch, R. 2000. "GIS and the Acquisition of Spatial Information: Differences among Adults and Young Adolescents," *Research in Geographic Education*. 2: 65 - 95.
- Bunch, R. 1999. "Searching for Color Boundaries on Maps," *Southeastern Geographer*. 34: 220 - 234.

Other Publications

- Bunch, R., Patton, J., Nelson, E., Hertz, C., and Stine, R. 2006. "Geographic Information Science in Health: Priming the Pump." *Directions Magazine: The Worldwide Source for Geospatial Technology*. (2006, May).
http://www.directionsmag.com/article.php?article_id=2188
- Bunch, R., Nelson, E., and Stine, R. 2005. GIS and Public Health: A GIS Workbook. Department of Geography, University of North Carolina Greensboro. pgs. 1 - 76.
- Nelson, E., Bunch, R., and Stine, R. 2005. GIS and Public Health: A GIS Primer. Department of Geography, University of North Carolina Greensboro. pgs. 1 - 46.
- Bunch, R., Curry, K., and Patton, D. 2003. Geographic Information Systems Needs Assessment and Implementation Strategy for Isabella County, MI. Center for Geographic Information Science, Central Michigan University. pgs. 1 - 80.

Presentations

- Bunch, R. “GIS and Radio Wave Propagation Modeling,” Colloquium Guest Speaker, Department of Geography, University of South Carolina, Columbia, SC, 2010 (Invited).
- Bunch, R., and Tapp, A. “Predicting Broadband Service Coverage for Wireless Networks,” The e-NC Authority Data Confab, Chapel Hill, NC, 2010 (Invited).
- Ackerman, W., and Bunch, R. “A Comparative Analysis of Indian Gaming in the United States,” Annual Meeting of the Association of American Geographers, Washington D.C. 2010.
- Hertz, C., Jones, E., Noble, E., Bunch, R., Murphy, A., Tobin, G., and Faas, A. “Combining GIS and Network Analysis to Compare Social Distance with Geographic Distance,” American Anthropological Association, San Francisco CA, 2008.
- Bunch, R., and Lloyd, R. “Variations in Map-Reading Performance Efficiency,” Spatial Learning in Geography Workshop, National Geographic, Washington D.C. 2008 (Invited).
- Bunch, R. “Geographic Information Systems and Radio Wave Propagation Modeling,” Colloquium Speaker Series, College of Engineering, North Carolina A&T State University, NC 2007 (Invited).
- Bunch, R. “The Role of GIS in Health,” Annual Conference of the North Carolina Public Health Association, New Bern, NC 2006 (Invited).
- Gels, D., Stine, R., and Bunch, R. “Finding the Trail to Troublesome Creek: Withdrawal Route and Position after the Battle of Guilford Courthouse, 15-16 March 1781,” Southeastern Division of the Association of American Geographers, Morgantown, WV 2006.
- Patton, J., Nelson, E., Bunch, R., and Williams, R. “The Map Prototype: Experts and Novices,” Annual Meeting of the Association of American Geographers, Chicago, IL 2006.
- Bunch, R. “GIS and School Emergency Management: An Intraspace Perspective,” North Carolina Geographic Information Systems Conference, Winston-Salem, NC 2005.
- Williams, R., Patton, J., Nelson, E., and Bunch, R. “Defining the Map Prototype,” North American Cartographic Information Society, Portland, ME 2004.
- Bunch, R. “GIS and School Emergency Planning,” Department of Political Science, College of Charleston, Charleston, SC 2004 (Invited).

- Bunch, R., and Lloyd, R. “Sex and Familiarity with State Shapes and Locations,” Annual Meeting of the Association of American Geographers, Philadelphia, PA 2004.
- Lloyd, R., and Bunch, R. “Competing Sex Differences in Spatial Cognition,” Southeastern Division of the Association of American Geographers, Charlotte, NC 2003.
- Bunch, R., and Lloyd, R. “Geographic Information Systems and Spatial Information,” Annual Meeting of the Association of American Geographers, New Orleans, LA 2003.
- Lloyd, R., and Bunch, R. “Computation and Visualization of Learning Processes: GIS Functions and Users,” Annual Meeting of the Southeastern Division of the Association of American Geographers, Richmond, VA 2002.
- Bunch, R. “Slope-Aspect Visualization,” Annual Meeting of the Southeastern Division of the Association of American Geographers, Lexington, KY, 2001.
- Bunch, R. "Metric Map Distortions for Adults and Young Adolescents," Annual Meeting of the Southeastern Division of the Association of American Geographers, Chapel Hill, NC 2000.
- Lloyd, R., and Bunch, R. “Visual Search: Cognitive and Cartographic Effects,” Annual Meeting of the Association of American Geographers, Pittsburgh, PA 2000.
- Hodgson, M., Lloyd, R., and Bunch, R. “A Justification for Ordering Information Extraction Steps: A Cognitive View,” 2000 ASPRS Annual Conference, Washington, DC 2000.
- Bunch, R. “Searching for Color Boundaries on Maps,” Annual Meeting of the Southeastern Division of the Association of American Geographers, Memphis, TN 1998.
- Bunch, R. “Searching for Color Boundaries on Bi-polar Choropleth Maps,” Annual Meeting of the South Carolina Academy of Science, Greenwood, SC 1998.
- Carbone, G., Lloyd, R., Bunch, R., and Li, X. “Comparison of Different Interpolation Techniques with Monthly Precipitation Data,” Annual Meeting of the Association of American Geographers, Boston, MA 1997.

Student Mentoring

Ph.D. (Chair)

- Anna Faith Tapp
- Jasraj Gramopadhye

- Carly Hertz, “*Measuring Social Vulnerability to Natural Hazards: An Examination of the United States Virgin Island,*” Department of Geography, University of North Carolina Greensboro (2011).

- Thomas Tricot, “*Instructional Geographic Information Science: Map Overlay and Spatial Abilities,*” Department of Geography, University of North Carolina Greensboro (2010).

- Timothy Mulrooney, “*Turning Data into Information: Assessing and Reporting GIS Metadata Integrity Using Integrated Computing Technologies,*” Department of Geography, University of North Carolina Greensboro (2009).

- Co-Chair, Elizabeth Walton, “*Using Ecological Niche Modeling to Predict Actual and Potential Habitat for the Bog Turtle, Glyptemys muhlenbergii,*” Department of Geography, University of North Carolina Greensboro (2009).

Ph.D. (Committee member)

- Mary Hall Brown

- Debasish Chaudhuri, Department of Geography, University of North Carolina Greensboro (2008).

Masters (Chair)

- Kristen Johnson
- Pamela Hurst
- Alex Sinykin
- Sean Kelly

- Stephanie Edwards, “*Geographic Information Systems in the Social Sector: Trends, Opportunities, Barriers, and Best Practices,*” Department of Geography, University of North Carolina Greensboro (2011).

- Co-Chair, Scott Baker, “*Analyzing the Impacts of Tree Canopy on Cellular Radio Networks,*” Department of Geography, University of North Carolina Greensboro (2010).

- Jason Parrish, “*Geographic Information Systems and Spatial Analysis of Market Segmentation for Community Banks*,” Department of Geography, University of North Carolina Greensboro (2009).
- Anna Faith Tapp, “*Mapping the Impact of Vegetation and Terrain on Cellular Signal Levels*,” Department of Geography, University of North Carolina Greensboro (2008).
- Carly Hertz, “*The Role of Geographic Information Systems in Epidemiology and Public Health*,” Department of Geography, University of North Carolina Greensboro (2006).
- Guy-Justin Andromel Nuyda, “*Using Geographic Information Systems with Wireless Telecommunication and Topography*,” Department of Geography, University of North Carolina Greensboro (2005).
- Co-Chair, Douglas Gels, “*Finding the Trail to Troublesome Creek*,” Department of Geography, University of North Carolina Greensboro (2005).

Masters (Committee Member)

- Penny Miller, Department of Geography, University of North Carolina Greensboro (2009).
- Jason Marshall, Department of Geography, University of North Carolina Greensboro (2009).
- Anita Henderson, Department of Geography, University of North Carolina Greensboro (2008).
- Kenneth Thompson, Department of Geography, University of North Carolina Greensboro (2008).
- Zeb Holden, Department of Geography, University of North Carolina Greensboro (2007).
- Gavin Chance, Department of Geography, University of North Carolina Greensboro (2007).
- Evans Kwame Amankwah, Department of Geography, University of North Carolina Greensboro (2007).
- Christopher Freeman, Department of Geography, University of North Carolina Greensboro (2005).
- Jon Parkin, Department of Geography, Southern Illinois University (2001).
- Brad Szedler, Department of Geography, Southern Illinois University (2001).

Undergraduate

- Advisor for Senior Assignment, Jared Eatmon, "*The Addition of Thompson Bend Riparian Corridor to the U.S. Army Corps of Engineers Database,*" Department of Geography, Southern Illinois University (2002).
- Advisor for Senior Assignment, Robert Hursey, "*The Cartographic Process: Mapping SIUE Alumni,*" Department of Geography, Southern Illinois University (2002).