

**Roy S. Stine**  
**Associate Professor of Geography**  
**Director of the Geographic Information Science Certificate Program**  
**University of North Carolina Greensboro**

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**Education:**

Ph.D. The University of South Carolina, Columbia, S.C., 1991.  
M.A. Montana State University, Bozeman, Mt., 1983.  
B.S. Appalachian State University, Boone, N.C., 1978.

**Publications; Reviewed Books and Journals:**

Stine, Roy S., Elisabeth Nelson and Michael Swaim, 2006 “Improving Spatial Understanding of Historic Battles: Cartographic Animation and the Battle of Guilford Courthouse” Research in Geographic Education, Volume 8, pp. 73-89.

Bunch, Rick L., Jeffrey C. Patton, Elizabeth S. Nelson, Carly L. Hertz, Roy S. Stine, 2006 “Geographic Information Science in Health: Priming the Pump” Directions Magazine: The Worldwide Source for Geospatial Technologies, May 31, [http://www.directionsmag.com/article.php?article\\_id=2188](http://www.directionsmag.com/article.php?article_id=2188).

Marshall, Jason, Chris Evans and Roy S. Stine 2005 “Water pollution and Sediment Transport Due to Hurricane Bonnie and Tropical Depression Earl: A Remote Sensing Perspective on the Cape Fear River” Papers and Proceedings of the Applied Geography Conference Volume 28. Graham A. Tobin and Burrell E. Montz Editors. Applied Geography Conferences, Inc. pp. 190-198.

Hall-Brown, Mary, Roy S. Stine and Warner Phelps, 2004. “GIS Evaluation for Field Dissipation in the Northern Wheat Belt” WorldMinds : Geographical Perspectives on 100 Problems. Donald G Janelle, Barney Warf and Kathy Hansen Editors. Kluwer Academic Publishers, pp.553-558.

Stine, Linda F., Roy S. Stine and Kristen S. Selikoff, 2003. “Multidisciplinary Landscape Research at Tannenbaum Historic Park, Guilford County, North Carolina” North Carolina Archaeology, Oct., Vol. 52: 20-52.

Stine, Roy S., 2000. "Finding the Forge: Geographic Visualization in Archaeology" in Historical Archaeology, 34(4):61-73.

Stine, Roy S., Ryun Papsen and Robert Vogel, 1999. "Development of a Geographic Information System Database for the Guilford Courthouse National Military Park" in Papers and Proceedings of the Applied Geography Conferences, pp. 174-181.

Stine, Roy S. and Linda F. Stine, 1999. "Research at 'Bisset Plantation': Archaeology at Riverbreeze Park, Volusia County, Florida" in The Florida Anthropologist, pp. 85-102.

Stine, Linda F. and Roy S. Stine, 1997. "South Carolina's Landscapes: Innovative Research and Culture Resource Management Perspectives." In L. F. Stine, L. Drucker, M. Zierden, and C. Judge (Eds.), Carolina's Historical Landscapes. Knoxville, TN, University of Tennessee Press, pp. 189-204.

Stine, Roy S. and Linda F. Stine, 1996. "Migration and Community Down on the Farm." In D. G. Bennett (Ed.), Snapshot of the Carolina's: Landscapes and Cultures pp. 121-124.

Stine, Linda F. and Roy S. Stine, 1993. "South Carolina's Landscapes: New Cultural Resource Management Perspectives" Historic Landscapes in South Carolina: Historical Archaeological Perspectives of the Land and Her People. Editors Linda F. Stine, Lesley M. Drucker, Martha Zeirden and Christopher Judge, Council of South Carolina Professional Archaeology, pp. 4-16.

Breedlove, Benjamin W. and Roy S. Stine, 1992. "Planning Functional Wildlife Habitats" Earth Observation Magazine, Dec., Published by Earth Observation Magazine. pp. 32 -38.

Stine, Roy S., and David P. Lanter, 1990. "Considerations for Archaeology Database Design" Interpreting Space, GIS and Archaeology, (Eds. Kathy Allen, Stanton Green and Ezra Zubrow), Taylor and Francis, London, England. pp. 80 - 89.

Stine, Roy S., and T. Drew Decker, 1990. "Archaeology, Data Integration and GIS" Interpreting Space, GIS and Archaeology, (Eds. Kathy Allen, Stanton Green, and Ezra Zubrow), Taylor and Francis, London, England. pp. 134 -140.

Stine, Linda F. and Roy S. Stine, 1990. "GIS, Archaeology and Freedom of Information" Interpreting Space, GIS and Archaeology, (Eds. Kathy Allen, Stanton Green, and Ezra Zubrow), Taylor and Francis, London, England, pp. 54-63.

### **Graduate Students Supervised:**

### **1998 Graduates Committee Chair:**

Cole, Cathy "Geographic Information Systems and Golf Course Management" Graduation Date December 1998. Current Position: GIS Director for the Rockingham County, NC.

Morgan, Joe "Digital Classification and Urban Forest Area Inventory: An Approach to Delineate Urban Forest Stands Using Scanned And Rectified Panchromatic Imagery for the City of Greensboro, NC" Graduation Date December 1998. Current Position: Ph.D. Candidate in Geographic Information Science at the State University of New York Buffalo.

Reep, Cynthia "The Beginning of a Geographic Information System for the North Carolina Zoological Park: Studying Land-Use by Spatial Representations" Graduation Date December 1998. Current Position: System Analyst for EPS Inc.

Selikoff, Kristen "A Comparison of GIS Education Methods: An Internship Project with ESRI, Inc., Redlands, California" Graduation Date December 1998. Current Position: Geographic Information Science Specialist for the Forsyth County.

#### **1999 Graduates Committee Chair:**

Bowles, Gregory, "The Ecological Impact of Retirement Development in High-Amenity, Rural Coastal Areas" Graduation Date May 1999. Current Position: GIS/GPS Director Miner and Miner Inc., Athens GA.

Vogel, Janice, "Utilizing GIS to Provide Site Selection for Agricultural chemical Use on Crops Rotating with Cotton in the United States" Graduation Date December 1999. Current Position: Geographic Information Science Specialist for Amec Environmental Company.

Zerbe, Heather, "Theory and Practice: A Dual Approach to Effective GIS Education" Graduation Date December 1999. Current Position: Technical Customer Support Representative with ESRI, Inc., Redlands, CA.

#### **2001 Graduates Committee Chair:**

Hall-Brown, Mary B., "GIS Evaluation for Field Locations for Field Dissipation Work in North Dakota, South Dakota, Minnesota and Montana (The Northern Wheat Belt)" Graduation Date May 2001. Current Position: Physical Geography Laboratory Director/GIS Instructor Department of Geography University of North Carolina Greensboro, Greensboro, NC.

Allen, Daniel, "Identification of Potential Drinking Water Test Sites For Propiconazole and a Human Risk Assessment Using Remote Sensing and GIS" Graduation Date December 2001. Current Position: GIS Analyst with Mudsprings, Inc.

Cashwell, William T., "The Use of Remote Sensing and Geographic Information Systems to Identify Riparian Restoration Sites on the Mears Fork Watershed, Guilford County, North Carolina" Graduation Date December 2001. Current Position: GIS Analyst with the West Virginia State Department of Natural Resources, Charleston WV

#### **2002 Graduates Committee Chair:**

Swaim, Michael, "Animating the Guilford Courthouse National Military Park Map: Geographic

Visualization and Public Education" Graduation Date May 2002. Current Position: GIS Analyst with Mudsprings, Inc.

**2003 Graduates Committee Chair:**

Lewis, Jason, "Internet Mapping: Dynamic Distribution of Spatial Information" Graduation Date December 2003. Current Position: ESRI Charlotte Office.

**2004 Graduate Committee Chair:**

Alford, Jennifer A. "Geographic Visualization: Internet Mapping for Non-Technical Users" Graduation Date May 2004. Current Position: GIS analyst for the Greensboro Fire Department.

**2005 Graduate Committee Chair:**

Freeman, Christopher P. "Municipal Geospatial Information Security" Graduation Date May 2005. Current Position GIS analyst for the City of Greensboro

Davidson, Charles "Developing an Intranet Data Service and GIS Application with Object-Oriented Programming" Graduation Date May 2005. Current Position GIS analyst for Winston-Salem, Forsyth County Planning Department.

Gosai, Mayur A. "Identification of Ecological Barriers: *Terrapene carolina* (Eastern Box Turtle) in Greensboro, North Carolina Using GIS and Remote Sensing" Graduation Date May 2005. Current Position PhD student UNCG Geography and Syngenta Senior Intern.

Gels, Douglas Maj. "Finding the Trail to Troublesome Creek: An Application of GIS to Identify Nathanael Greene's Withdrawal Route and Position After the Battle of Guilford Courthouse, 15-16 March 1781" Graduation Date December, 2005. Current Position Major US Army, Washington DC.

Hughes, William; Course work option. Graduation Date December, 2005. Current Position GIS Analyst for Communications Titan (in Korea).

**2006 Graduate Committee Chair:**

Hoover, Kyle "Riparian Corridor Conservation Design Study for the Dan, Mayo and Smith Rivers in Rockingham County, NC" Graduation Date May 2006. Current Position Ecologics Inc. Greensboro NC

Ramakrishnan, Smitha "Georegistration for Digital Archiving and Distribution of Scanned Geologic Maps of North Carolina: A Cooperative Effort with the Library of Congress and NCSU Libraries" Graduation Date May 2006.

Walton, Elizabeth "Using Remote Sensing and Geographic Information Science to Predict and Delineate Critical Habitat for the Bog Turtle, (*Glyptemys muhlenbergii*)" Graduation Date May 2006. Current Position PhD student UNCG and Teaching Assistant UNCG, Geography.

**Current Graduate Students,**

**PhD**

Mayur Gosai  
Debasish Chaudhuri  
Mary Hall-Brown  
Elizabeth Walton  
Prasad Pathak

**MA**

Kathy Wolfe  
Chris Cox  
Tim Foster  
Christopher Evans  
Damon Cassinio  
Cassidy Hey

**1998 Graduates Committee Member:**

Penland, Travis "Geographic Techniques in Public Health."

**1999 Graduates Committee Member:**

Davis, Morgan, "Greensboro Lake Crisis 1998/1999 and GIS Implementation."

Vogl, James, "Legal Issues in the Dissemination of GIS Data by North Carolina Agencies."

**2001 Graduate Committee Member:**

Tricot, Thomas A., "Using GIS to Prioritize Land Acquisition in a Piedmont North Carolina Watershed."

**2003 Graduate Committee Member:**

Watson, Charles, "Evaluation of the Urban Heat Island Effect in a Medium Size, Mid-latitude City."

**2004 Graduate Committee Member:**

Armburster, Amada L. "The Role of Environmental Education in Fostering Pro-environmental Behavior Change"

Renken, Rebecca "The Geography of Low Weight Births in Guilford County, 2000-2002"

### **2005 Graduate Committee Member:**

Nuyda, Guy-Justin A. "Using Geographic Information Systems with Wireless Telecommunication and Topology: A CityScape Consultants Internship Project"

### **Grants:**

"GIS Research Internships with Syngenta Crop Protection." \$86,032.93 from Syngenta Crop Protection, Inc. 2006. (Roy S. Stine Principle Investigator, Jeffrey Patton Co-Principle.)

"GIS and Advanced Modeling of Wireless Telecommunications." \$71,254 from CityScape Consultants, Inc., 2006-2008. Rick Bunch, Roy Stine and Jeffrey Patton Co-Principles.

UNCG Scholars' Travel Fund award \$350 for paper presentation in Merida, Mexico, 2006.

"Student Internship Program with the Guilford County Planning Department" \$12,750 in August of 2005

"A Geomorphic-Trophic Hypothesis for Benthic-Pelagic Coupling in Artic Lakes" \$850,000 from the National Science Foundation and RUI grant, received August 2005. Anne E Hershey, Chris Luecke, W. John O'Brien, Roy Stine and Stephen C Whalen co-Principles).

"Student Internship Program with the Guilford County Planning Department" \$15,120 in August of 2005

"GIS and Telecommunication Models for Public Policy" \$23,751 from CityScape Consultants, received June 2005. (Roy Stine, Rick Bunch and Jeffrey Patton co-Principles).

"GIS and Public Policy Dimensions: Emerging and Merging Solutions to Bioterrorism" \$70,000 from Guilford County Department of Public Health, received May 2005. (Rick Bunch, Roy Stine and Elisabeth Nelson co-Principles).

"GIS Research Internships with Syngenta Crop Protection." \$77,400 from Syngenta Crop Protection, Inc. received in August 2005. (Roy S. Stine Principle Investigator, Jeffrey Patton Co-Principles.) (Dollar figure project throughout the end on the summer 06).

"3D Cell Tower Mapping and Analysis" \$16,328 from CityScape Consultants, received August 2004. Roy Stine, Rick Bunch and Jeffrey Patton Co-Principles).

"GIS Research Internships with Syngenta Crop Protection." \$48,400 from Syngenta Crop Protection, Inc. received in August 2004. (Roy S. Stine Principle Investigator, Jeffrey Patton Co-Principles.)

"PHRST Graduate Research Internship through UNC Greensboro" \$14,389 from Public Health Regional Surveillance Team, Guilford County Department of Public Health, received December

2004. This grant will help develop methods to map public health threats from bioterrorism, naturally occurring disease outbreaks and other concerns.

“Visual Learning systems Grant Program for Institutes of Higher Education” \$500,000 from Visual Learning Systems, Inc., received in August 2003, two year software development grant.

“GIS Research Internships with Syngenta Crop Protection.” \$48,400 from Syngenta Crop Protection, Inc. received in August 2003. (Roy S. Stine Principle Investigator, Jeffrey Patton Co-Principles.)

“GIS Research Internships with Syngenta Crop Protection.” \$48,400 from Syngenta Crop Protection, Inc. received in August 2002. (Roy S. Stine Principle Investigator, Jeffrey Patton Co-Principles.)

"Student Internship Program with the Guilford County Planning Department" \$15,120 in August of 2002

"Market/Demographic Analysis of Downtown Greensboro Part II" \$8,768 from Downtown Greensboro Inc, Roy Stine and Andrew Brod Co-Principles

Received a Summer Stipend to Develop a Distance/E-learning Course. \$4,000 from University of North Carolina Greensboro, in July of 2001.

“GIS Research Internships with Syngenta Crop Protection.” \$48,400 from Syngenta Crop Protection, Inc. received in August 2001. (Roy S. Stine Principle Investigator, Jeffrey Patton Co-Principles.)

"Student Internship Program with the Guilford County Planning Department" \$19,890 in August of 2001.

"Visualization the Intersection Between Science and Art" \$2,000 Ashby Dialogue Award from the College of Arts and Science at UNCG, 2001-2002.

"Market/Demographic Analysis of Downtown Greensboro." \$8,768 from Downtown Greensboro Inc. Roy Stine and Andrew Brod Co-Principles, 2002.

GIS Research Internships with Syngenta Crop Protection, Inc. \$12,539 received from Syngenta Crop Protection, Inc. in November of 2001.

GIS Research Internships with Syngenta Crop Protection, Inc. \$11,532 received from Syngenta Crop Protection, Inc. in August of 2001.

Received a Summer Stipend to Develop a Distance/E-learning Course. \$4,000 from University of North Carolina Greensboro, in July of 2001.

GIS Applications in Agricultural/Chemical Science. \$11,532 received from Novartis Crop

Protection, Inc. in August of 2000. (Roy S. Stine Principle Investigator, Jeffrey Patton, Joe Morgan and James Nelson Co-Principles.)

Protocols to Translate Hierarchical Databases to Relational Databases for GIS. \$13,076 grant extension from Novartis Crop Protection, Inc. received in August of 2000. (Roy S. Stine Principle Investigator and Jeffrey Patton Co-Principle.)

Protocols to Translate Hierarchical Databases to Relational Databases for GIS. \$20,000 grant extension from Novartis Crop Protection, Inc. received in January of 2000. (Roy S. Stine Principle Investigator, Jeffrey Patton and Elizabeth Nelson Co-Principles.)

Protocols to Translate Hierarchical Databases to Relational Databases for GIS. \$10,000 received from Novartis Crop Protection, Inc. in July of 1999. (Roy S. Stine Principle Investigator, Elizabeth Nelson and Jeffrey Patton Co-Principles.)

The Development of Bivariate Crop Rotation Maps. \$10,000 received from Novartis Crop Protection, Inc. in July of 1999. (Roy S. Stine Principle Investigator, Jeffrey Patton and Elizabeth Nelson Co-Principles.)

Cooperative Agreement Between the National Park Service and UNC-G. A two-year (1999-2001) \$27,000 grant received March 1999 to work with the Guilford County National Military Park in GIS design and analysis.

Internal Novartis GIS Software and Database Design. \$9,883 received from Novartis Crop Protection, Inc. in April 1999.

Development of Geographic Information Systems (GIS) Methods for Planning and Database Management of Environmentally Sensitive Golf Communities. \$16,286 received from Audubon International in February of 1999.

Summer Excellence Research Award. Received from UNCG, \$4,000 for the summer of 1998.

Grant for Internships between Hayes, Seay, Mattern & Mattern, Inc. and the University of North Carolina at Greensboro 1997 -1999. \$30,000 awarded over a 3 year period for student interns (Roy S. Stine and Jeffrey C. Patton Co-Principle Investigators).

ESRI (Arc/Info & ArcView) Geographic Information Systems Software Upgrade for Microsoft NT Operation System, \$13,500 awarded March 1997 for permanent software addition from ESRI Inc., Redlands California.

Development of a Digital Cartography/Remote Sensing Laboratory. National Science Foundation Total Grant awarded \$65,000. Matching Grant, \$30,000, awarded June of 1996, UNCG matched the NSF grant with \$35,000. (Roy S. Stine and Jeffrey C. Patton Co-Principle Investigators).

Summer Excellence Research Award. Received from UNCG, \$4,000 for the summer of 1996.



New Faculty Grant. Received from UNCG, \$2,434 for the summer of 1996.

ESRI (Arc/Info) Geographic Information Systems Software Support. Received from ESRI, Inc., Charlotte, NC, \$6,400 permanent software addition 1995.

ERDAS Digital Image Processing Software Support. Received from ERDAS, Inc., Atlanta, GA, \$8,000 for one year 1995.

The Alabama Power Company Foundation awarded to the Samford University Center for Environmental and Spatial Information Analysis, Roy Stine, Paul Blanchard and Ronald Huntsinger (Co-PI's), a \$ 20,000 per year (for 2 years) library improvement grant. This grant will be used to increase the Davis Library holdings pertaining to geographic techniques and environmental issues. The money will be used to buy computers, CD's, juke boxes, journals, proceedings and books. Notification of Grant Award January, 1995.

The National Aeronautics and Space Administration Office of Human Resources and Education grant announcement # NP-294, awarded to the Alabama Space Grant Consortium and the Alabama EPSCoR Project, a three (3) year plus 1/2 matching research grant. Roy Stine and George Cline Co-Principal Investigators for the Remote Sensing Cluster. Total grant to the Remote Sensing Cluster is \$ 948,913 over 3 years. Participating universities include Samford, Jacksonville State, Alabama A & M, Athens State, and Miles College. Notification of grant award June, 1994.

Roy S. Stine and D. Gregory Jeane, Co-Principal Investigators, awarded an ERDAS training center to be placed on the Samford campus, 1993. Total value of equipment and software approximately \$ 65,000. The hardware includes 4 SUN SPARC 2's, 1 CD-ROM, 1 8mm tape drive, 4 one (1) gigabyte hard drives. The software will be the ERDAS Image Processing Imagine series.

Research, Travel and Data Collection Grant from the Egyptian Studies Association for Dissertation Research. Total amount \$20,000, awarded 1990.

Sigma Xi, the Scientific Research Society, Travel Grant. Total amount \$600, awarded 1990.

Kodak Processing Labs (now Kodalux) Grant to aid in film development. Total amount \$800, awarded 1990.

### **Professional Publications and Reports:**

Nelson, Elisabeth S., Rick L. Bunch, Roy S. Stine and James A. Nelson "GIS and Public Health: A GIS Primer" A UNCG Workshop for North Carolina Public Health Departments, 2005.

Bunch, Rick L., Elisabeth S. Nelson, Roy S. Stine and James A. Nelson "GIS and Public Health: A GIS Workbook" A UNCG Workshop for North Carolina Public Health Departments, 2005.

Stine, Roy S. editor and author, 2001. "Development of a Geographic Information System Database for the Guilford Courthouse National Military Park: Final Report" Authors: Roy Stine, Michael Swaim, Ryun Papsen and Jennifer Alford. The report, presented on 5 CD-Roms, also contains a multi-thematic spatial database including satellite images, digital orthophotographs; scanned historic maps and a variety of current land use and land cover layers.

Stine, Roy S. editor and author, 1999. "Geographic Information System: Protection Needs Assessment" submitted to Novartis in partial fulfillment of grant entitled "Internal Novartis GIS Software and Database Design." Report included Spatial Database and a variety of maps. Grant awarded 1999.

Stine, Roy S. editor and author, 1999. "Geographic Information System Database Development at the Guilford Courthouse National Military Park" submitted to the Guilford Courthouse National Military Park in partial fulfillment of grant entitled "Cooperative Agreement Between The National Park Service and The University of North Carolina at Greensboro." Report also contained a multi-thematic spatial database including satellite images, digital orthophotographs, scanned historic maps and a variety of current land use and land cover layers. Grant awarded 1999.

Stine, Linda F. & Roy S. Stine, 1997. An Archaeological Search for a Blacksmith Shop, Site 31Ca29, Reed Gold Mine State Historic Site, Cabarrus County, North Carolina. Prepared for the Gold History Corporation, Stanfield, North Carolina and the Department of Cultural Resources, Division of Archives and History, Historic Sites Section, Raleigh, North Carolina.

Stine, Roy S. & Linda F. Stine, 1993. "GPS and Digital Image Processing: A Natural Alliance" Mapping the World: Proceedings 1993 ERDAS Users Group Meeting. Atlanta, GA., Oct 11 - 13, 1993, pp 99 - 105.

Stine, Roy S., 1991. "Nile Silts and Predynastic Sites; Remote Sensing and Geographic Information Systems Research of Hierakonpolis Egypt." Unpublished Dissertation on file at Univ. of South Carolina, Columbia, S.C.

Brockington and Associates, Inc., R.S. Stine contributing author, 1987. Archaeological Survey and Testing of Charleston National Golf Course, Charleston County, S.C. On file S.C. SHPO, Columbia, S.C.

Brockington and Associates, Inc., R.S. Stine contributing author, 1987. Archaeological Survey of the Morgan's Pointe Tract, Charleston, S.C. On file S.C. SHPO, Columbia, S.C.

Stine, Linda F., R.S. Stine, H. Ayers, E. France, and R. Rowell, 1987. Intensive Archaeological and Historical Survey of Five Sites at the Proposed Burke County Landfill. On file N.C. SHPO, Raleigh, N.C.

Stine, Roy S., L.F. Stine, and H. Ayers. 1986. "The Preliminary Archaeology Survey of the Proposed Burke County Landfill." On file N.C. SHPO, Raleigh, N.C.

Stine, Linda F. and R.S. Stine, 1986. "Archaeological Survey of Spearman - Marshall Properties, Harnett County, N.C." On file N.C. SHPO, Raleigh, N.C.

Garrow and Associates, Inc., R.S. Stine contributing author, 1986. Cultural Resource Management: Vogtle - Scherer Transmission Line, Wallace Dam Plant Scherer Station; Putnam, Baldwin, Jones and Monroe Counties, Georgia. Resource Inventory I and Resource Inventory II, Final Report. Submitted to Georgia Power Company.

Garrow and Associates, Inc., R.S. Stine contributing author, 1984. Cultural Resource Management: Vogtle - Effingham - Thalmann Transmission Line; Burke Screven, Effingham, Chatam, Bryan, Liberty, Long, McIntosh and Glynn Counties, Georgia. Resource Inventory II, Final Report. Submitted to Georgia Power Company.

Stine, Roy S. 1983. "From a Chicken-Coop to a Multi-National: The History of the Sikorsky Facilities". On file at the United Technologies Corporate Archive and Historical Resource Center, East Hartford, Ct.

#### **Invited Lectures:**

Stine, Linda F., Roy S. Stine and Michael Swaim 2005 "Visualizing the Battle of Guildord Courthouse: GIS and 3-D Animation" NC GIS Conference Winston Salem NC, March 3-4, 2005.

Stine, Roy S. "Infra-Red Imaging: Past, Present and Future." Presented at GIS 2001 A Spatial Odyssey: North Carolina Geographic Information systems Conference March 102, 2001. The Benton Convention Center, Winston-Salem, North Carolina.

Stine, Roy S. "GIS Jobs and Graduate Opportunities" North Carolina Agricultural and Technical State University, Department of Landscape Architecture, Greensboro, N. C. April 2000.

Stine, Roy S. "Retirement Communities, Wetlands and Visualization." Presented at the Department of Geography, The University of South Carolina Columbia, Columbia, SC, April 22, 1999.

Stine, Roy S. "Introduction to Geographic Information Science." North Carolina Agricultural and Technical State University, Department of Landscape Architecture, Greensboro, N. C., April 13, 1999.

Stine, Roy S. "The University Geographic Information Science (GIS) Laboratory: Problems and Promises." Presented at the Department of Earth Sciences, University of North Carolina Wilmington, Wilmington, NC, December 4, 1998.

Stine, Roy S. "Geographic Information Systems (GIS) in Cultural Resource Management (CRM) and Historic Preservation." Presented at the South Carolina State Office of Historic Preservation, Columbia, SC

Stine, Roy S., "Geographic Information Systems and Remote Sensing" presented at the Department of Public Health faculty & graduate colloquium. University of Alabama Birmingham, Nov. 10, 1993.

### **Papers Presented at Professional & Academic Meetings:**

Stine, Linda F. and Roy S. Stine, 2007 "Rural or Urban? Greensboro's Historical Landscapes" Society for Historical Archaeology 40<sup>th</sup> Annual Conference, Williamsburg, VA., January 10-14, 2007.

Stine, Roy S., Douglas Gels, and Rick Bunch, 2006 "Finding the Trail to Troublesome Creek: Withdrawal Route and Position after the Battle of Guilford Courthouse, 15-16 March 1781" Sixty-First Annual Meeting of the Southeastern Division of the Association of American Geographers, Morgantown, WV., November 19-21, 2006.

Stine, Roy S., 2006 "Remote Sensing and GIS Analysis at the Tannenbaum and Troublesome Creek Archaeology Sites" Society for Anthropology in Community Colleges Conference, Merida, Mexico, March 8-11, 2006.

Marshall, Jason, Chris Evans and Roy S. Stine 2005 "Water pollution and Sediment Transport Due to Hurricane Bonnie and Tropical Depression Earl: A Remote Sensing Perspective on the Cape Fear River" Applied Geography Conference, Washington DC, Nov. 2-5, 2005.

Eggleston, Tim, Edlyn Walsh and Roy S. Stine 2005 "North Carolina Coastal Geomorphologic Changes and Pollution Following the Hurricanes of 1999" Applied Geography Conference, Washington DC, Nov. 2-5, 2005.

Stine, Roy, Gordon Bennett, Greg Bowles and Tracy Ferguson, "Wetland and Retirement Communities in Brunswick County NC" ASPRS Annual Conference, Anchorage, AK May 5-9, 2003

Stine, Roy "The Use of Satellite Imagery and Public Domain Spatial Data to Identify and Create a Risk Assessment Model for Pesticide Contamination Testing in Community Drinking Water Supplies" XXI FIG International Conference, Washington, DC April 19-26, 2002

Swaim, Michael, Roy Stine and Jeff Patton. "Visualizing Guilford Courthouse" Presented at the NACIS Meeting in Oct. 2001 in Portland Oregon.

Brown, Mary Hall, Roy Stine and Warner Phelps. "GIS Evaluation for a Field Dissipation Study in North Dakota, South Dakota, Minnesota, and Montana (The Northern Wheat Belt)" Presented at the SEDAAG Meeting in Nov. 2001 in Lexington Kentucky.

Stine, Roy S. "The Impact of Development on the Wetlands along the Inter-coastal Waterway in Brunswick County, North Carolina" American Society for Photogrammetry and Remote Sensing

Annual Conference, Washington, D.C., May 22-26, 2000.

Stine, Roy S. "Colonial Maps and GIS: Creating a Database for the Guilford Courthouse National Military Park" the Nineteenth Annual Meeting of the North American Cartographic Information Society, Williamsburg, VA Oct 20-23, 1999.

Stine, Roy S. "Defining and Visualizing Uncertainty" the Applied Geography Conferences. Charlotte, North Carolina Oct. 13-16 1999.

Stine, Roy S., Ryun Papsen and Robert Vogel. "Development of a Geographic Information System Database for the Guilford Courthouse National Military Park" the Applied Geography Conferences. Charlotte, North Carolina Oct. 13-16 1999.

Stine, Roy S., D. Gordon Bennett and Gregory D. Bowles "The Ecological Impact of Retirement Development in High-Amenity, Rural Coastal Areas." The Association of American Geographers 95 Annual Meeting, Honolulu, Hawaii, March 23-27, 1999.

Stine, Roy S. "Visualization in Plantation Archaeology: Emerging Perspectives from the Bisset Plantation (8VO4586), Volusia County, Florida." Southeastern Archaeology Conference, Greenville, SC. November 11-14, 1998.

Stine, Roy S. "Viewing the Whole: Digital Image Processing and Scientific Visualization in Archaeology," American Society for Photogrammetry and Remote Sensing Annual Conference, Tampa, FL. March 30-April 3, 1998.

Stine, Linda F., Kristen Selikoff and Roy S. Stine "Blacksmith Shop Archaeology: Forging a Different Perspective" Society for Historical Archaeology, Atlanta GA, Jan. 6-10, 1998. (published abstract).

Stine, Roy S., Kristen Selikoff "Finding the Forge: Scientific Visualization at Reed Goldmine" Society for Historical Archaeology, Atlanta GA, Jan. 6-10, 1998. (published abstract).

Stine, Roy S. "Viewing the Whole: Digital Image Processing and Scientific Visualization in Archaeology" American Society for Photogrammetry and Remote Sensing, Tampa FL, March 30 - April 4, 1998. (published abstract).

Stine, Roy S. and Linda F. Stine "Research at the Bisset Plantation" Northeastern Florida Plantation Symposium, Daytona Beach, Florida. March 22, 1997.

Stine, L. F. and Stine, R. S. "Bridging Distances: Recent Approaches to Immigration, Migration, and Ethnic Identity" Society for Historical Archaeology Meetings, Cincinnati, Ohio. January 3 - 7, 1996.

Stine, Roy S., "The Alabama Geographic Information Systems Exchange: A Private Non-Profit State Agency" presented at the ESRI User's Conference, May, 1995.

Stine, Roy S., "Geographic Information Systems (GIS) Educational Opportunities in the Birmingham Metropolitan Area" presented at The Systems, Technologies And Resources (STAR) Consortium Meeting, Birmingham AL, Nov. 11, 1994.

Stine, Roy S., "Digital Image Processing and Mathematical Components Within the ERDAS Software" presented at a meeting to the Remote Sensing Cluster of the Alabama Space Grant Consortium & representatives from Alabama Power Company and the ERDAS Corporation, Samford University, Birmingham AL, June 22, 1994.

Stine, Roy S., "Archaeological Database Design of a GIS: A Case Study from Volusia County Florida" Presented at the 71st Annual Meeting of the Alabama Academy of Science, Troy State University, Troy AL, March 25, 1994.

Stine, Roy S., "Remote Sensing and Global Positioning Systems: Research and Opportunities in Archaeology and Biology" presented to the Departments of Geography/Archaeology and Biology faculty, graduate & undergraduate colloquium, Jacksonville State University, Jacksonville AL, March 13, 1994. Presented as a lecture series for the Remote Sensing Cluster of the Alabama Space Grant Consortium.

Stine, Roy S & L. F. Stine, "GPS and Digital Image Processing: A Natural Alliance" presented at the 7th Annual ERDAS Users Group Meeting. Atlanta, GA, Oct 11 - 13, 1993.

Stine, Roy S., "Before the Pharaohs: Remote Sensing and GIS at Hierakonpolis, Egypt", presented at the 70th Annual Meeting of the Alabama Academy of Science, University of Alabama, Huntsville. Huntsville, AL, March 24 - 27, 1993.

Stine, Roy S. and T.A. Downs, "Using GPS as a Primary Input for GIS", presented at the American Society for Photogrammetry and Remote Sensing Annual Meeting. New Orleans, LA, Feb. 14 - 18, 1993.

Stine, Linda F., T.A. Downs and R.S. Stine. "GPS Potential in Archaeology Survey", presented at the American Society for Photogrammetry and Remote Sensing Annual Meeting. New Orleans, LA, Feb. 14 -18, 1993.

Green, Stanton, R.S. Stine, "Infinite Landscapes; The Role of View in Landscape Archaeology", presented at the Anthropology of Human Behavior through Geographic Information and Analysis Conference, Univ. of Calif. Santa Barbara, National Center for Geographic Information and Analysis. Feb 1 - 2, 1992.

Stine, Roy S., "Principles of Aerial Photographic Interpretation", presented at the Color Infrared Aerial Photography: an information/application conference, Columbia, SC, July, 25, 1991.

Stine, Roy S., "Remote Sensing and GIS Research of Predynastic Hierakonpolis, Egypt", presented at the Annual Meeting of the Association of American Geographers Miami, FL April 13 - 17, 1991.

Jensen, John R., E.J. Christensen, and R.S. Stine, "Solid and Hazardous Waste Disposal Site Selection Using Digital Geographic Information System Techniques", presented at the Computer Applications in Civil Engineering, World Congress Center, Atlanta, Georgia, June 12, 1990.

Kovacik, Charles F., and R.S. Stine, "Quail Hunting as an Alternate Rural Land Use in South Carolina", presented at the Association of American Geographers Conference, Toronto, Canada, April, 1990.

Stine, Roy S., "Boundaries in a Siteless World", presented at the Southeastern Division, Association of American Geographers, Student Honors Competition, 1990 Annual Meeting Columbia, S.C., Nov. 18 - 20.

Stine, Roy S., "Statistical Analysis of Rural Sites", Geography Session, South Carolina Academy of Science, Columbia, S.C., April 20, 1989.

Stine, Roy S., and David P. Lanter, "Geographic Techniques in Archaeology" presented at the First Archaeological Conference, Baltimore, Maryland, January 6, 1989.

#### **University Service:**

Elected to the College of Arts and Science Promotion and Tenure Committee for a two year term starting in Fall 2006 ending Spring 2008.

Elected to the Faculty Senate for a three year term starting in Fall 2004-Spring 2007.

Appointed to the Faculty Senate Representative to the University budget committee Fall 2004-Spring 2006.

Continued as Director of Undergraduate Internships 2006

Continued as Director of Geographic Information Science Certificate 2006

Chair of Search Committee for an Assistant/Associate Faculty position in GIS/Public Policy starting 2004.

Member of the College of Arts and Sciences Budget and Planning Committee 2002-2003 and 2003-2004.

Instructional and Research Computing Faculty Liaison for the Geography Department, Presentation to High School Students in the College of Arts and Science Fast Forward Program, Presentation of High School Students interested in Science Majors at UNCG, 2002

Member of the Research Grants Committee & the Research Grants Subcommittee on Science, 2002.

Served on the College Task Force on Instructional Technology and Distance Education, summer 2000. Report turned in to Walter Beale, Dean of the College of Arts and Sciences.

Department of Geography Library Representative, 1996-2001.

Faculty Liaison to the College of Arts and Science Instructional and Research Computing Committee, 1999-2001.

College of Arts and Science Technology Committee, 1997-2000.

Serving on the College's Instructional Area Committee for Social and Behavioral Science for a three-year term beginning in the fall of 1997-2000. I was asked to extend my service on this committee for the 2000-2001 year.

Served on the Library Serials Screening Sub-Committee 1996-2000.

Member of the Geography Search Committee for tenure track position beginning in fall 1999.

Member of the Geography Search Committee for a GIS Laboratory Director, position beginning in fall 1999.

Served on the Library committee for a three year term (1996-1999).

Elected to Chair the Library Committee for the 1997 - 1998 year.

Worked with the Teaching, Learning and Technology Roundtable Chaired by Ray Purdom at the request of Provost Uprichard to help implement and upgrade technology throughout the University 1997-1998.

Member of the Geography Search Committee for a 1 year visiting faculty position, beginning in the fall of 1997.

Faculty Advisor to Kappa Phi Chapter of Gamma Theta Upsilon, the Geography Honor Society 1997-1998.

Member of Geography Search Committee for GIS/Cartography Laboratory Director, 1996.

Member of the Elliott Lecture Series Committee (1995-1996), Academic Speaker Subcommittee member 1995, and Publicity subcommittee chair for 1996.

### **Professional and Public Leadership and Service:**

Reviewed NSF Proposal number 0650066 "Collaborative Research: Improving Small Area Population Estimation with High Resolution Remote Sensing" Fall 2006



Moderator for the Session, "The Lewis & Clark Corps of Discovery" NC GIS Conference  
Winston Salem NC, March 3-4, 2005.

Moderator for the Session, "Award-Winning Graduate Student Presentations" NC GIS  
Conference Winston Salem NC, March 3-4, 2005.

Program Committee Member for the NC GIS Conference Winston Salem NC, March 3-4, 2005.

Moderator for the Session, "Change Detection" ASPRS Annual Conference, Anchorage, AK  
May 5-9, 2003.

Education Issues for the GIS Professional, Panel Member, Lyna Wiggins Rutgers University  
Moderator, NCGIS Conference, Winston Salem, NC Feb 20-21, 2003

University Panel Discussion, Panel Member, 2002 Carolina GITA Conference & Expo, Chapel  
Hill, NC Nov 14

Moderator for the Session, "Remote Sensing: Change Detection 3 (Grass/Forest) XXI FIG  
International Conference, Washington, DC April 19-26, 2002

Currently serving as a Member of the Steering Committee for the "Carolina Backcountry  
Alliance." The Alliance consists of non-profit organizations, National Park Service Employees,  
American Battlefield Protection Program Employees, and Representatives from the North and  
South Carolina Departments of Archives and History and Tourism Divisions. The purpose of the  
organization is to identify, document, protect and publicize Colonial era sites and battlefields in  
the Backcountry of North and South Carolina.

Serving on the Steering Committee for the North Carolina Center for Geographic Information  
and Analysis 2001 Conference.

Paper Discussant at the Fifty-Fifth Meeting Association of American Geographers Southeastern  
Division, Chapel Hill, NC Nov. 18-21, 2000. Paper title: Contextual Information and Experience  
In Remote Sensing Information Extraction: A Cognitive Perspective by Michael Hodgson and  
Robert Lloyd.

Reviewed Proposal entitled "An Investigation to Promote NASA Earth Science Enterprise  
Initiatives in Coastal South Carolina" for the South Carolina Space Grant Consortium, Summer  
of 2000.

Session Chair "Land Management Planning" American Society for Photogrammetry and Remote  
Sensing Annual Conference, Washington, D.C., May 22-26, 2000.

Participated on a Review Panel for the NSF reviewing 19 proposals directed towards the  
Consortium for Oceanographic Research and Education, National Oceanographic Partnership  
Program. Grants pertained to the development and design of the Ocean Biogeographical  
Information System. Panel met in Washington, D.C., March 21 and 22, 2000.

Reviewed Proposal number 9985039 for the NSF, 2000.

GIS day Chair, organized and public presentation and brought in over 200 Middle School students to participate in a GIS/GPS field day at the Guilford Courthouse National Military Park, National Park Service. The sponsors of GIS day included UNCG Department of Geography, Anderson and Associates Inc., Novartis Crop Protection Inc., Earth Data International Inc., Guilford Courthouse National Military Park (NPS), The City of Greensboro GIS Department, The City of Highpoint GIS Department, Guilford County Wide GIS Department, and the North Carolina Department of Transportation. Students attending the field day came from Southwest Middle School, Jefferson Day School, Kiser Middle School and Eastern Guilford Middle School.

Organized and Chaired the Session "Visualization of Geographic Data" for the Applied Geography Conference, Charlotte, North Carolina Oct. 13-16 1999

Stine, Roy S. Moderator, Award-Winning graduate Student Presentations. 1999 North Carolina Geographic Information Systems Conference: Generating Innovative Solutions, Winston-Salem, North Carolina, February 11-12.

Serving as an Editor/Reviewer to "The Remote Sensing Core Curriculum Electronic Peer Review Series" this program is sponsored by NASA, the National Center for Geographic Information and Analysis (NCGIA) and the American Society for Photogrammetry and Remote Sensing (ASPRS).

Served on the Advisory Committee to the North Carolina Community College System, to review GIS Technician Certification feasibility study 1998-1999.

Served on the Steering Committee for the North Carolina Center for Geographic Information and Analysis 1999 Conference.

Served as a Moderator in the World Geography Bowl, held at the UNC-G Campus, Oct. 1998.

Elected to the Executive Committee for the Affiliated GIS Users Group. This Committee advises Center for Geographic Information and Analysis which is part of the State of North Carolina Office of State Planning, 1997-1999.

Stine, Roy S. "Remote Sensing and Geographic Information Systems" Presentation given to the O. Henry Golden K, Kiwanis Club of, Greensboro N.C. April 24, 1997.

Served as a paper discussant at the Southeastern Division of the American Association of Geographers, Athens, Georgia, 1996. Paper title: "A GIS-Based Simulation Model for Urban Land Development."

Served as a Judge in the World Geography Bowl, held at the UNC-G Campus, Oct. 1996.

Unpaid mapping and surveying consultant for an archaeological research project at the Reed

Gold Mine State Historic site, Georgetown, N.C., 1996 -1997.

Member of the SEDAAAG Resolutions Committee 1995-1996.

Founding member and served on the Board of Directors and the executive committee of the Alabama Geographic Information System Exchange (AGIS Exchange) from 1994-1995. The founding members of the exchange include representatives from Alabama Power Company, Samford University and the United States Geological Survey. This non-profit organization is set up to exchange spatial information. While in this position we completed a raster database of Alabama at a scale of 1:24,000. These maps conform to the federal Spatial Data Transfer Standards and are part of the National Spatial Data Infrastructure. All data held by AGIS Exchange is open to the public via internet and browsed by a metadatabase.

Member of the AGIS Exchange Technical Committee from 1994-1995. This committee helped determine and make recommendations to the AGIS executive committee on all hardware, software, data, and operational matters.

Selected to serve on the Advisory Committee for the Southern Appalachian Highlands Ecoregional Task Force. This task force has received a multiyear grant to study forestry practices throughout the southern Appalachian region 1994-1995.

Helped to found the Samford University Center for Environmental and Spatial Information Analysis. Dr. Paul Blanchard, Director, Dr. Ronald Huntsinger, Director for Environmental Issues; and Dr. Roy Stine, served as Director for Spatial Issues, 1994-1995.

Elected Vice Chairman of the Geography Section of the Alabama Academy of Sciences for the 1993-1995 term.

Selected as Graduate Student Intern at the United Technologies Archive and Historic Resource Center for the Spring Semester of 1983.

Selected as an exchange student to attend the University of Idaho from Montana State University for the Fall Semester of 1982.

### **Experience:**

Associate Professor of Geography UNCG, teaching responsibilities include General Earth Science, Interpretation of Aerial Photography and graduate course work in Geographic Information Science, and Digital Image Processing, 2001-present.

Assistant Professor of Geography UNCG, teaching responsibilities include General Earth Science, Interpretation of Aerial Photography and graduate course work in Geographic Information Science, and Digital Image Processing, 1995-2001.

Director, RUST International Geographic Information Systems Lab and Assistant Professor of Geography, Samford University, 1993 to 1995. Teaching duties included three GIS courses; Digital Image Processing, Interpretation of Aerial Photography and Cartography. Management responsibilities include the RUST International GIS Lab (Dos, Apple, and Unix based), as well as the ESRI Training Center (UNIX based), and the ERDAS Training Center (UNIX based) all of which are located on the Samford Campus.

Consulting remote sensing and Geographic Information Systems (GIS) scientist with Smart and Associates Inc., Cary NC 1994 to present.

Consulting remote sensing scientist with the Law Firm of Earl, Blank, Kavanaugh & Stotts (Miami FL) on the Everglades Environmental Litigation, throughout 1994.

Remote sensing scientist and Geographic Information Systems (GIS) consultant with LAW Environmental, Inc. of Atlanta GA, on a variety of projects throughout 1994.

Senior Scientist, Breedlove, Dennis & Associates, Inc., Orlando, Florida, 1991 to Dec. 1992. Project management responsibilities included: Development of digital image processing/geographic information system (GIS) capabilities to enhance environmental analysis; develop markets for remote sensing and GIS consulting.

Self Employed from 1986 to 1987. Projects successfully completed include Historian for the Burke County Landfill Testing project. Historic Research and Restoration of Houses dated c. 1790, 1800, 1900, and 1940, archaeological survey and testing of the Ayr-Mount Plantation, Hillsboro, NC, and archaeological and historic survey and testing Spearman-Marshall property in Harnett County, NC. All reports are on file at the NC SHPO Office, Raleigh, NC and/or submitted to clients.

Historian and Archaeology Field Director for Brockington and Associates, Inc., Atlanta, Georgia, 1985-1986.

Historian and Senior Archaeological Field Technician for, Garrow and Associates Inc., Atlanta, Georgia. 1984-1985.

### **Associations:**

Association of American Geographers (AAG)  
American Congress on Survey and Mapping  
American Society of Photogrammetry and Remote Sensing  
Applied Geography  
North American Cartographic Information Society  
North Carolina Arc/Info User's Group  
Southeastern Division of the AAG  
Society for Historical Archaeology  
Southeastern Archaeology Society