

## **L. SHEA ROSE**

Department of Geosciences  
College of Science and Mathematics  
University of West Georgia

### **Education**

- 2008      Ph.D. Geography (Urban Climatology), The Florida State University  
Dissertation: *A Spatial Analysis of Lightning Strikes and Precipitation in the Atlanta, Georgia (USA) Region*  
Committee: Dr. Tony Stallins, Dr. James Elsner, Dr. Xiaojun Yang and Dr. Tim Chapin
- 1996      B.A. Energy and Environmental Studies, The Evergreen State College  
Research Topic: *A Digital Temperature Network for Remote Heat Flow Monitoring*  
Advisor: Dr. Robert Knapp (physics)

### **Research Interests**

Applied Statistical Analysis; Cartographic Visualization; Urban Climatology; Energy & Sustainability

### **Academic and Professional Positions**

- 2017 -      Assistant Dean, College of Science and Mathematics, University of West Georgia
- 2013 -      Associate Professor, Department of Geosciences, University of West Georgia
- 2008 - 2013   Assistant Professor, Department of Geosciences, University of West Georgia
- 2002 - 2008   Graduate Teaching, Research and GIS Lab Assistant, Florida State University
- 1998 - 2002   Research Associate, Lawrence Berkeley National Laboratory  
Environmental Energy Technologies Division, Heat Island Group, Berkeley, CA
- 1997-1998   Computer Aided Drafting Department Manager  
Webb Structural Steel Design and Detailing, Dothan, AL
- 1996      Research Assistant, Oak Ridge National Laboratory  
Energy & Transportation Science Division, Buildings Research Group, Oak Ridge, TN
- 1993, 1996   State of Alabama Certified Tutor, Pathways Program, Wallace College  
US Department of Education Program for at-risk students, Dothan, AL

## Honors and Awards

- 2015 University of West Georgia, Risk Management Environmental Health and Safety: Community Award for Contributions to Environmental Sustainability
- 2013 University of West Georgia, College of Science and Mathematics, Excellence in Teaching Award
- 2011 Department of Energy Fellowship, Faculty and Student Team Research on Science and Policy, Environmental Protection Agency, Office of Air and Radiation, Heat Island Reduction Program, Washington, D.C.
- 2005 Phi Kappa Phi Honor Society

## Teaching Experience

The University of West Georgia

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|---|--|
| Graduate<br>Geospatial Tech. Practicum*   | Computer Cartography (GIS)   |
| Undergraduate<br>Computer Cartography (GIS)<br>Environment and Health*<br>Applied Climatology*<br>Human Impacts on the Environment<br>Landforms Geography/Lab<br>Weather & Climate/Lab<br>*Indicates New Course Development | Energy & Sustainability*<br>Local Sustainability*<br>Meteorology<br>Intro to Geographic Analysis<br>Intro to GIS<br>Environmental Science/Lab* |

The Florida State University

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|--------------------------|-----------------------|
| World Regional Geography | Environmental Science |
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## Funding

Funded Proposals

### External

Application of Energy Related Core Ideas and Practices across Middle and Secondary Earth, Environmental, and Life Sciences Content. Dr. L. Shea Rose (PI), Dr. Gail Marshall and Professor Judy Cox (Co-PIs). US Department of Education. Improving Teacher Quality State Grants Program-Title II, Part A. February 2017 – May 2018. \$49,492.

February 2018

Application of Energy Related Core Ideas and Practices across Middle and Secondary Earth, Environmental, and Life Sciences Content. Dr. L. Shea Rose (PI), Dr. Gail Marshall and Professor Judy Cox (Co-PIs). US Department of Education. Improving Teacher Quality State Grants Program-Title II, Part A. February 2016 – May 2017. \$47,850.

National Atlas Project: Cartographic Perspectives of the Physical Geography of the Korean Peninsula. Seong, J.C. (PI), Hwang, C. (Co-PI), and Rose, S. (Co-PI). Korean Geographical Society. 2015-2016. \$8,400.

A Community Garden for the University of West Georgia. Rose, S., Butts, L., Hembree, J., and Fox, J. Community transformation grant from the Centers for Disease Control and Prevention (CDC) led by Tanner Health System. 2014-2015. Gifts in kind for the garden including a sign, seeds, and soil.

Extending the LiDAR Project of Coastal Regional Commission of Georgia to Okefenokee National Wildlife Refuge. Dr. J.C. Seong (Principal) and Dr. S. Rose (Co-PI). United States Geological Survey. February 2010 – July 2011. \$491,214. Includes private companies, student internships, and student assistants.

Analysis of Vegetative Effects on Albedo in Urban Environments. Dr. L. Shea Rose (PI). Lawrence Berkeley National Laboratory, Environmental Energy Technologies Division, Berkeley, CA. November 2009 – February 2011. \$20,188. Includes 4 student assistants.

#### Internal

Louis-Stokes Alliance for Minority Participation-Geosciences, NSF LSAMP – Dr. Swamy-Mruthinti, Institutional PI (2014-16). 2 student research stipends.

Developing Inquiry-Based Environmental Science Investigations for Place Based Learning, BOR Stem II Grant, University of West Georgia Institutional STEM Excellence (2015-16). \$7,250.

Community Level Action for Sustainability, Student Research Assistance Program, University of West Georgia (July 2014 – May 2015). \$1,800.

Building Applied Skills in Energy (BASE): A hands-on approach to understanding the potential energy production from photovoltaic panels, BOR Stem II Grant, University of West Georgia Institutional STEM Excellence (2013-14). \$5,868.

Local Sustainability, Student Research Assistance Program, University of West Georgia (July 2013 – May 2014). \$2,000.

Ecological Sustainability at the Community Level, Student Research Assistance Program, University of West Georgia (August 2012 – May 2013). \$2,000.

A GIS Examination of Community Sustainability, Student Research Assistance Program, University of West Georgia (August 2011 – May 2012), \$2,000.

### External Not Funded

Strategies: Connecting STEM Learning to Atmospheric Research for Community Health (ARCH). Dr. Linda Haynes (PI), Dr. L. Shea Rose (Co-PI). NSF Innovative Technology Experiences for Students and Teachers (ITEST). Submitted September 2017. April 2018 – March 2021. \$1,200,000. Pending.

Project REACH (Researching Earth's Atmosphere for Community Health). Improving Teacher Quality State Grants Program-Title II, Part A. Dr. Linda Haynes (PI), Dr. L. Shea Rose (Co-PI). Submitted November 2016. February 2017 – May 2018. \$59,474.

Connecting the Classroom to the Community: Students and Teachers R.E.A.C.H. (Researching Earth's Atmosphere for Community Health). Dr. Linda Haynes (PI), Dr. L. Shea Rose (Co-PI). NSF Innovative Technology Experiences for Students and Teachers (ITEST). Submitted August 2016. April 2017-March 2020. \$1,196,574. Not Funded.

Using NASA Data to Diagnose Climate and Vegetation Driven Trends in Allergic Respiratory Disease: Guidance for Public Health Decision Making, NASA Earth Science Applications: Health and Air Quality. Includes investigators from Florida State University and Florida Department of Health. December 2014 – December 2017. \$543,643 in total. Not funded.

Collaborative Research: Investigation of Thunderstorm-Related Asthma Morbidity in United States Cities: A Case Study of Metropolitan Atlanta, GA. Includes Emory University and University of Georgia investigators. Revised for submission to NSF Geography and Regional Science, \$39,265 UWG portion, Submitted March 2013. Not funded.

### **Research Articles**

DeSilva, L.A., Tennakone, K., Zander, C., **Rose, S.**, and Kerlin, A. Measurement of Solar Spectral Irradiance and Surface Ozone at Carrollton, during Great American Eclipse on August 21st, 2017. *Journal of Atmospheric and Solar-Terrestrial Physics*. Under Review.

Kerlin, A., DeSilva, L.A., **Rose, S.** and Hasbun, J. E. 2016. Calculating the Sun's Photospheric Temperature, an Undergraduate Physics Laboratory. *Georgia Journal of Science*, Volume 74, Issue 2, Article 13.

**Rose, L.S.** and Levinson, R. 2013. Analysis of the Effect of Vegetation on Albedo in Residential Areas: Case Studies in Suburban Sacramento and Los Angeles, CA. *GIScience & Remote Sensing*, Volume 50, Issue 1, Pages 64-77.

**Rose, L.S.**, Seong, J.C., Ogle, J., Butte, E., Indridason, J., Hall, J., Nelson, S., Jones, T., and Humphry, J. 2013. Challenges and Lessons from a Wetland LiDAR Project: A Case Study of the Okefenokee Swamp, Georgia, USA. *Geocarto International*, Volume 28, Issue 3, Pages 1-17.

- Rose, S.**, Stallins, J.A. and Bentley, M. 2008. Climatological and Single-Event Scale Visualizations of Urban Cloud-to-Ground Flashes in Atlanta, Georgia. *Earth Interactions*, Volume 12, Pages 130.
- Akbari, H. and **Rose, L.S.** 2008. Urban Surfaces and Heat Island Mitigation Potentials, *Journal of the Human-Environmental System*, Volume 11, Number 2, Pages 85-101.  
DeSilva, L.A., Tennakone, K., Zander, C., **Rose, S.**, and Kerlin, A.
- Stallins, J.A. and **Rose, S.** 2008. Urban Lightning: Current Research, Methods, and the Geographical Perspective. *Geography Compass*, Volume 2, Pages 620-639.
- Stallins, J. A., Bentley, M. L. and **Rose, L. S.** 2006. Cloud-to-Ground Flash Characteristics for Atlanta, Georgia (USA) from 1992-2003. *Climate Research*, Volume 30, Pages 99-112.
- Rose, L. S.**, Akbari, H., and Taha, H. 2003. Characterizing the Fabric of the Urban Environment: A Case Study of Greater Houston, Texas. LBNL-51448. Berkeley, CA.  
<http://escholarship.org/uc/item/3ww7p48f>.
- Akbari, H., **Rose, L. S.** and Taha, H. 2003. Analyzing the land cover of an urban environment using high-resolution orthophotos. *Landscape and Urban Planning*, Volume 63, Issue 1, Pages 1-14.
- Berdahl, P., Akbari, H., and **Rose, L. S.** 2002. Aging of reflective roofs: Soot Deposition. *Applied Optics*, Volume 41, Issue 12, Page 2355.

## Recent Presentations

- Rose, L.S.** 2017. Developing undergraduate research through integrating the R-language into an applied climatology course. The Geological Society of America Annual Meeting. Seattle, Washington.
- Rose, L.S.** and LaRow, T. 2016. The Relationship between Climate Oscillations and Regional Extremes. American Geophysical Union Annual Conference. San Francisco, California.
- Rose, S.**, Chambers, K.\*, McClain, M.\*, Ojiagbaje, S.\*, Moore, J.\*, and Eytalis, J.\* 2015. GIS Field Collection to Support a Tree Inventory for Campus Sustainability. Association for the Advancement of Sustainability in Higher Education Annual Conference. Minneapolis, Minnesota.
- Rose, S.** 2015. American Meteorological Society Climate Studies Implementation in a Hybrid Course Format. 95<sup>th</sup> American Meteorological Society Annual Meeting. Phoenix, Arizona.
- Rose, S.** 2014. Active Learning in an Undergraduate Energy and Sustainability Course. Third Conference on the Physics of Sustainable Energy: Using Energy Efficiently and Producing It Renewably. Berkeley, California.

Seong, J.C., **Rose, S.**, Ogle, J.\*, and Indridason, J. 2012. LiDAR Surveying on Okefenokee Swamp: Issues and Challenges. American Society for Photogrammetry and Remote Sensing (ASPRS) 2012 Annual Conference. Sacramento, California.

**Rose, S.** and Patel, N. 2011. The US EPA's Heat Island Reduction Program Activities. International Workshop on Advances in Cool Roof Research. Berkeley, California.

**Rose, S.** and Indridason, J.A.\* 2011. Impacts of Urban Vegetation on Community Albedo. Annual Meeting of the Association of American Geographers. Seattle, Washington.

Seong, J.C. and **Rose, S.** 2011. Mapping with LiDAR - Opportunities and Challenges. Annual Meeting of the Association of American Geographers. Seattle, Washington.

Seong, J.C. and **Rose, L.S.** 2010. Experience from the LiDAR Project of Okefenokee National Wildlife Refuge. AmericaView 2010 Fall Technical Meeting. Madison, Wisconsin.

\*Indicates student researcher

## **Panel Session**

Rawlings, L., Cumming, W., **Rose, S.**, Halvorson, S., Harty, J., and Lash, J. 2013. Outdoor Classroom, Sponsored by Geography Faculty Development Alliance, Geography Education Specialty Group, and Applied Geography Specialty Group, Annual Meeting of the Association of American Geographers. Los Angeles, CA.

## **Recent Directed Student Research Presentations**

Brown, Benjamin. 2017. Impact of High School Educational Experience on College Graduation at UWG. Southeastern Division of the Association of American Geographers Annual Meeting. Starkville, Mississippi.

Gordon, Henrick. 2017. An Examination of the Educational Success of Under-Represented Groups. Southeastern Division of the Association of American Geographers Annual Meeting. Starkville, Mississippi.

Head, Trevor. 2017. A Geographic Analysis of ACC and SEC Rosters. Southeastern Division of the Association of American Geographers Annual Meeting. Starkville, Mississippi.

Patterson, Haley. 2017. The Impacts of Terrorism on Travel. Southeastern Division of the Association of American Geographers Annual Meeting. Starkville, Mississippi.

Purcell, William. 2017. Examining Fan Bases Using Social Media for Professional Football Teams. Southeastern Division of the Association of American Geographers Annual Meeting. Starkville, Mississippi.

- Randolph, Ellen. 2017. Geographic Trends of a New Dance Form in the U.S. Southeastern Division of the Association of American Geographers Annual Meeting. Starkville, Mississippi.
- Moore, Javantae. 2016. The Cry Wolf Syndrome on College Campuses: Analysis of Weather Closing Communication. Georgia-Alabama LSAMP Spring Symposium. Atlanta, Georgia.
- Moore, Javantae and Ojiagbje, Stephanie. 2015. An Examination of Seasonal Patterns of Pollen and Atmospheric Factors in the Birmingham, AL Region. Georgia-Alabama LSAMP Spring Symposium. Atlanta, Georgia.
- Bowens, Sesame and Ojiagbje, Stephanie. 2014. Urban Heat Island Planning Strategies in Georgia Cities. Georgia Journal of Science. 72:1.
- Bowens, Sesame, Ojiagbje, Stephanie, and **Rose, S.** 2014. Urban Heat Island Mitigation and Planning Strategies in Georgia Cities. Georgia-Alabama LSAMP Spring Symposium. Atlanta, Georgia. Award Winning Presentation: 1<sup>st</sup> Place in Poster Session for Physics Division.
- Tzegaegbe, Dana 2014. Examining Land Use at the University of West Georgia. Southeastern Division of the Association of American Geographers Annual Meeting. Athens, Georgia.
- Burleson, Jeff. 2014. Cultural Geography of Agricultural Festivals in Georgia. Southeastern Division of the Association of American Geographers Annual Meeting. Athens, Georgia.
- Cornelison, Lillie. 2014 University of West Georgia Forest Degradation Caused by Suburban Sprawl in North Atlanta. Southeastern Division of the Association of American Geographers Annual Meeting. Athens, Georgia.

### **Invited Speaker**

- Science, Energy, and Sustainability: Progress and Challenges. National Science Honor Society Induction Ceremony and Energy Expo, Luella High School, Locust Grove, Georgia, December 2017.
- Environmental Risks of the Keystone XL Pipeline, League of Women Voters of Carrollton and Carroll County, February 2013.

### **Professional Affiliations**

American Geophysical Union  
 American Meteorological Society: 2014-15 Climate Diversity Project Cohort  
 Association of American Geographers  
 International Association for Urban Climate  
 Phi Kappa Phi Academic Honor Society  
 Southeastern Division of the Association of American Geographers

## **Professional Development**

National Center for Atmospheric Research (NCAR) Regional Climate Tutorial. Foothills Laboratory, Boulder, CO. August 10-12, 2016.

Sustainability and Curriculum: American Association for Sustainability in Higher Education Workshop for Campus Leaders, Emory University, Atlanta, GA. January 7-8, 2016.  
Representative for UWG's Center for Sustainability.

Lockheed Martin awarded "School of Ice." Conducted by the U.S. Ice Drilling Program Office in partnership with American Meteorological Society. Denver, Colorado. June 14-18, 2015.

American Meteorological Society Climate Studies Diversity Project. Washington, D.C. May 18-28, 2014.

NASA supported "The Greenhouse Effect of Learning" at Georgia State University. Atlanta, Georgia. June 5-6, 2013.

U.S. EPA's 12<sup>th</sup> Community Involvement Training Conference. 2011. Community Involvement in the 21<sup>st</sup> Century: Embracing Diversity, Expanding Engagement, Utilizing Technology. Arlington, Virginia. July 19-21, 2011.

## **Academic Service**

### University Committees

UWG Catalog Governance Committee, Spring 2018

UWG General Education Program Assessment Committee, Area D Representative, Spring 2018

UWG Barrier Team, College of Science and Mathematics Representative, Fall 2015-present  
Soft Benefits Subcommittee Member, Sledgehammer Awarded

Graduate Programs Committee, College of Science and Mathematics Representative, Fall 2015-Spring 2017

Disciplinary Appeals Committee, 2013-2015

Campus Tree Advisory Board, 2012-2016

Sustainability Council, College of Science and Mathematics Representative, Fall 2014-Spring 2016

Earth Week Committee, Spring 2014-Spring 2016

At-Large Member of Advisory Committee, College of Science and Mathematics, 2012-2013



Search Committees: Tenure-Track Assistant Professor of Geology, 2015-2016  
Tenure-Track Assistant Professor of GIS, 2011-2012  
Tenure-Track Assistant Professor of GIS, 2010-2011  
Tenure-Track Assistant Professor of Geosciences, 2009-2010

### Student Mentoring

Outside Graduate Committee Member: Aron Hall. (MA Thesis, Sociology, 2015). The environmental impact of relocation on health outcomes of Hurricane Katrina survivors.

### Student Organization

Green Elite. Focus on sustainability: Starting the UWG Community Garden and composting with Carve on the Quad. Advisor Fall 2013 – Summer 2016.

### Reviews

U.S. Dept. of Education, Improving Teacher Quality State Grants-Title II, Part A. Managed by the University of Georgia for the University System of Georgia. TQ Grant Proposals 2017-2018.

The Association for the Advancement of Sustainability in Higher Education (AASHE). Reviewer for the AASHE 2015 Annual Conference, October 25-28, 2015.

Manuscript reviews for the journals *Remote Sensing of Environment*, *Cities and the Environment (CATE)*, and *Applied Geography*.

## **Selected Community Service**

- January 2018 Hosted Energy Ideas Implementation in Middle and High School Life, Earth and Environmental Sciences Poster Session for Teachers, Gordon State College, Funded solely by the Improving Teacher Quality State Grants Program, Elementary and Secondary Education Act, Title II, Part A.
- December 2016 American Geophysical Union, Outstanding Student Paper Awards Graduate Student Research Competition Judge
- March 2016 UWG Sustainability in the Curriculum Workshop, UWG's Center for Sustainability, Classroom Integration Techniques: Led Reading Discussion
- 2014-2016 Green Elite coordinated donations to Second Harvest, the Carroll County Soup Kitchen and Emergency Shelter from the UWG Community Garden
- 2015, 16, 17 UWG College of Education Spring STEM Competition Proctor/Judge
- December 2015 Interview with LaGrange Daily News, [Forecasters Predict Cold Wet Winter in Georgia as El Nino Drives Rainfall](#). AP article in media outlets including The Washington Times, The Arkansas Democrat, The Marietta Daily Journal and The Troy Messenger

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- July 2015 Interviews with the Times-Georgian and Lagrange Daily News on climate extremes
- June 2015 Interview with NSF's The Antarctic Sun about the "School of Ice 2015"  
<http://antarcticsun.usap.gov/science/contenthandler.cfm?id=4169>
- 2015 West Georgia Regional Science and Engineering Fair Judge
- 2014 Curriculum Development for SunPower for Schools, Green Power EMC
- February 2012 Environmental History Presentation and Recycling Activity, Girl Scout Daisy Troup, Ranburn, Alabama
- October 2009 Snow White in Community Production of "The Not So Scary Fairy Tales", The Townsend Center, UWG
- Oct. 2008 Mayhayley Lancaster in Community Production of "The Not So Scary Fairy Tales", The Townsend Center, UWG

### **Computer Skills**

ArcGIS, ERDAS Imagine, GeoDa, MS ACCESS, MS Excel, R language, FORTRAN and Visual Basic