

Steve Graham

Contact

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Education

Ph.D. Geological Sciences - The University of Texas at Austin
“Continental river routing for fully coupled climate system models” 2000.

B.S. Geological Sciences and Environmental Studies - Tufts University 1993.

Employment

University of Minnesota Duluth

2008-present Research Associate (Geographic Information Sciences Laboratory) - Research and support of educational activities and funded projects emphasizing GIS and spatial analysis, custom programming, web development, and data dissemination.

Penn State

2007-2008 Assistant Director GIA Core, Senior GIS Programmer/Analyst: (Population Research Institute) - Research and support emphasizing GIS and spatial analysis and statistics. Custom programming. Post-award project management.

2004-2007 Assistant Director GIA Core, GIS Programmer/Analyst: (Population Research Institute) - Research and support emphasizing GIS and spatial analysis and statistics. Custom programming.

2002-2004 Research Associate (Penn State Institutes of the Environment): Research and support emphasizing GIS, hydrologic modeling, and web development.

2000-2004 GIS Analyst (Population Research Institute): Research and support emphasizing GIS, spatial analysis, and statistics.

2000 Research Associate (Civil and Environmental Engineering): Development of web-based virtual field trips for river basins.

Professional Activities

Association of American Geographers (AAG)

Certified Geographic Information Systems (GIS) Professional (GISP)

Center for Sustainable Community Development (CSCD) Steering Committee

Minnesota GIS/LIS Consortium, student competition judge

Northern Minnesota GIS User Group

NASA Earth System Science Graduate Student Fellowship, 1996-99

Sustainable Development Research Opportunity (SDROP) Committee

UMD CLA Technology Advisory Committee

Selected Publications

Famiglietti, J. S., J. A. Devereaux, C. A. Laymon, T. Tsegaye, P. R. Houser, T. J. Jackson, **S. T. Graham**, M. Rodell, and P. J. van Oevelen, Ground-based investigation of soil moisture variability within remote sensing footprints during the Southern Great Plains 1997 (SGP97) Hydrology Experiment, *Water Resources Research*, 35(6), 1839-1851, 1999.

Graham, Stephen Thomas, *Continental river routing for fully coupled climate system models*, Dissertation, 2000.

Graham, S. T., J. S. Famiglietti, and D. R. Maidment, 5-Minute, 1/2°, and 1° Data Sets of Continental Watersheds and River Networks for Use in Regional and Global Hydrologic and Climate System Modeling Studies, *Water Resources Research*, 35(2), 583-587, 1999.

Najjar, R. G., L. Patterson and **S. Graham**. Climate simulations of major estuarine watersheds in the Mid-Atlantic region of the United States. *Climatic Change*, 95(1-2),139-168, 2008.

Shorr, N., R. Najjar, A. Amato, and **S. Graham**, Household heating and cooling energy use in the northeast USA: comparing the effects of climate change with those of purposive behaviors. *Climate Research*, 39(1), 19-30, 2009.

Selected Presentations / Lectures

Guest Lectures - MKTG 3761 Marketing Analytics I (UMD 2014)

- GEOG 5612 Field Techniques: St Louis County School District Transportation Efficiency Study (UMD 2010)
- BIOL 5808 Landscape Ecology: Theory and Application: Human Demographics (UMD 2008)

Instructor (Course)– GEOG 3563: Geographic Information Science I: Theory and Analysis (Fall 2010, Spring 2011)

Instructor (Workshop)- GIS and Population Science Advanced Spatial Analysis Workshop: *Geographically Weighted Regression* (University Park, PA; June 1 - June 6, 2008)

- GIS and Population Science Workshop 2003, 2005, 2006 (University Park, PA)
- PAA 2002 GIS and Spatial Analysis: *Demographic Applications* (Atlanta, GA; May 8, 2002)

Instructor - FEMA Dam Safety training: HEC-HMS (multiple locations; 2001-2006)

Selected Projects

Archeological Survey and GIS development in the Cloquet River Valley – develop a better understanding of existing and potential archaeological sites for study and preservation

Enterprise GIS and Interactive Campus map – developing an enterprise GIS database and interactive map for use on the University of Minnesota Duluth campus and associated properties.

- Update and upgrade UMD facilities management data for accuracy and accessibility

GIS of Culturally Significant Features, Spirit Mountain area – identifying cultural and archaeologically significant features especially with respect to Native Americans

Minnesota's Division of Homeland Security and Emergency Management

- Statewide HAZUS-MH Flood Analysis Study - developing a state-wide risk assessment focused on defining flood impacts and mitigation strategies
- County Multi Hazard Mitigation Plans (multiple projects)– developing county plans for mitigation of natural hazards and enabling federal financial assistance

St. Louis County School District's Transportation Study - assessment and analysis of current and proposed school district change scenarios focusing on transportation efficiency and costs

Wheelchair Accessible Trails – developing resources for public trails that are accessible to a variety of disabilities.

WI DNR Bordner Land-Use Survey Mapping – georeferencing, digitizing and recreation of historical Wisconsin land cover maps and data into a single digital geodatabase