

Joseph J. Kerski

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Career Goal

I seek to use my skills in geography and geographic information systems (GIS) to expand the use of geography and GIS in all sectors of society by teaching courses, developing curricula, fostering educational partnerships, conducting geographic education research, writing, and training teachers, students, governmental, and business users at all levels.

Education

Doctor of Philosophy: Geography, University of Colorado, 2000.

Dissertation Title:

The Implementation and Effectiveness of Geographic Information Systems Technology and Methods in Secondary Education.

Emphases: Geography Education, Geographic Information Systems, Population Geography. GPA=4.0

Committee members: A. David Hill, Barbara P. Battenfield, Andrei Rogers, Ronald Anderson (Department of Education), Rafael Moreno-Sanchez (MSCD).

Coursework Included: Geographic Teaching Materials, Research in Geographic Education, Disciplined Inquiry, History and Nature of Geography, Population Geography, Seminar in Geographic Information Systems, Internet in K-12 Education, Mathematical Demography, Web authoring independent study for Colorado Geographic Alliance, Quantitative Methods in Geography.

Master of Arts: Geography, University of Kansas, 1993.

Thesis title:

The Impact of the Bruce R. Watkins Roadway Project on Neighborhoods in Kansas City, Missouri.

Emphases: Geographic Information Systems, Population Geography. GPA=4.0

Coursework Included: GIS, Research Methods, Quantitative Methods, Historical Geography.

Bachelor of Arts, with Distinction: Geography, University of Colorado, 1984.

Emphases: Cartography, Computer Cartography. GPA=3.8

Coursework Included: Physical, cultural, regional, and historical geography, cartography, computer cartography, map use, Macro and microeconomics, environmental design, accounting, Spanish.

Additional Coursework and Training:

Education and Human Relations: Training Subject Matter Experts, Negotiation Skills.

GIS: Idrisi, ArcView, ArcInfo, ArcGIS, Maptitude, Geomedia, MapInfo, Image Analysis, Spatial Analyst, 3D Analyst, C Language, GRID, AML, Avenue, PhotoShop.

Other: Web authoring, Physical Geology, Spanish, MS Office, Dbase, Unix

Work Experience

Geographer and Cartographer
US Geological Survey

1989-present

Education Program; develop and conduct 40 workshops per year on digital and analog geospatial products and services to technical and primary, secondary, and university educational audiences; conduct educational research using GIS and remote sensing software; operate USGS exhibits at conferences; create geography education CD-ROMs and web pages; produce applications, databases, and maps for scientific projects using technical standards and computer procedures; write press releases, journal articles, web pages,

Teaching Experience

	brochures, and posters; conduct classes in ArcView, ArcGIS, Spatial Analyst, finding geospatial data on the Internet, and developing web resources; write curricula for Science Olympiad and other educational programs.
<i>Supervisory Geographer and Geographic Technician US Bureau of the Census</i>	Conducted geography program training for wide variety of audiences, including planners and researchers; trained and supervised up to 120 staffpersons in computer mapping and geocoding; coordinated geography and statistical area programs with state, local and tribal governments and other data users; developed computer databases to control TIGER map production and geographic programs; conducted research and development in digital cartography.
1985- 1989	
<i>Instructor Emily Griffith Opportunity School</i>	Advise Denver Public Schools on planning new GIS certificate program; Create and teach first GIS course in program.
2003-2004	
<i>Adjunct Instructor University of Denver</i>	Teach GIS concepts and methods courses at the University of Denver's GIS program. Create all laboratory exercises, exams, and curriculum.
2001-2004	
<i>Instructor Sinte Gleska University Rosebud, South Dakota</i>	Create and instruct the first online GIS course at the Rosebud Sioux's Sinte Gleska University. Advise university staff on program's design.
2002-2003	
<i>Guest Instructor University of Texas-El Paso</i>	Serve as guest instructor for several GIS courses for international, interdisciplinary GIS community in E-911 services, newspaper editing, regional council of governments, public works, wastewater treatment, and in other disciplines.
2001-2002	
<i>Guest Instructor University of Montana Missoula, Montana</i>	Served as guest instructor for University of Montana's online GIS course for educators. Answered technical and curriculum integration questions and worked with EOS staff.
2002	
<i>Adjunct Instructor Red Rocks Community College</i>	Created and maintained first GIS course at Red Rocks Community College; wrote successful grant proposal for GIS program strategic plan.
1995-2001	
<i>Visiting Scientist Program Participant Metropolitan State College</i>	Teach approximately 260 (thus far) hands-on classes and institutes at primary, secondary, and college level, on physical and cultural geography, GIS, remote sensing, cartography, and natural hazards, throughout Colorado.
1993-present	
<i>Adjunct Instructor Metropolitan State College</i>	Created GIS curriculum and taught Advanced Geographic Information Systems and ArcInfo courses; designed all laboratory exercises using Idrisi and ArcInfo; created all exams and assessment structure. Participated in campus-wide GIS implementation team.
1994-1995	

Publications

- Geographer, USGS*
1994-2003
- Teach approximately 40 workshops annually for news media, Congressional, educational, research, general public, and other audiences on the use and application of spatial data, technology, and methods.
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- Ross, Simon, and Joseph J. Kerski. *In Press*. Editors. *Essentials of the Environment*. United Kingdom: Hodder Educational Media.
- Kerski, Joseph J. 2004. GIS for Citizenship Education, in *Geography and Citizenship Education: Research Perspectives*. Edited by Ashley Kent and Andrew Powell. Published for the International Geographical Union Committee on Geographic Education by University of London Institute of Education. ISBN 0-9539850-4-0.
- Kerski, Joseph J. 2003-2005. Isn't That Spatial—Column on Geography Education Resources. *Perspective*. Jacksonville, AL: National Council for Geographic Education.
- Kerski, Joseph J. 2003. Foreword. *Making Community Connections*. Redlands, California: ESRI Press.
- Kerski, Joseph J. 2003. Geography education across the Atlantic at the Geographical Association. *Journal of Geography* 102(5). National Council for Geographic Education.
- Kerski, Joseph J. 2003. The implementation and effectiveness of GIS in secondary education. *Journal of Geography* 102(3): 128-137. National Council for Geographic Education.
- Malone, Lyn, Christine L. Voigt, Anita M. Palmer. 2003. *Community Geography: GIS In Action*. Redlands, California: ESRI Press. Served as technical editor.
- Malone, Lyn, Christine L. Voigt, Anita M. Palmer. 2002. *Mapping Our World: GIS Lessons for Educators*. Redlands, California: ESRI Press. Served as technical editor.
- Kerski, Joseph J. 2002. Introducing Geography and Technology into Science Through Biodiversity. *Meridian—A Middle School Technology Journal* (5): 1. Winter.
- Kerski, Joseph J. 2001. The Implementation and Effectiveness of GIS in Secondary Education. *International Research in Geographic and Environmental Education*. Fall.
- Kerski, Joseph J. and Alan Ward. 2000. GIS Education for Mapping Professionals. *Geomatics International Magazine*. July 2000.
- Kerski, Joseph J. and Steve Wanner. 2000. Mapping a Course in GIS and GPS in the High School Geography Curriculum. *Point of Beginning*. January 2000. Business News Publishing, Inc.
- Kerski, Joseph J. 2000. Exploring Glaciation with USGS Resources. *Focus, Geography's Magazine*. Winter. American Geographical Society.
- The Implementation of GIS in American Secondary Education: Results from a National Survey. 1999. *Proceedings, 19th Annual ESRI User Conference*.
- The Effectiveness of GIS in High School Education. 1999. *Proceedings, 19th Annual ESRI User Conference*.
- Kerski, Joseph J. 1998. Teaching About Karst. *Focus, Geography's Magazine* 45(2): 15-21. Fall. American Geographical Society.

Recent Professional Activities

Fits, Starts, and Headway: The Implementation of ArcView GIS-based Lesson Modules in the High School Geography Curriculum. 1998. *Proceedings, 18th Annual ESRI Conf.*

The Impact of the Bruce R. Watkins Parkway on Neighborhoods in Kansas City, Missouri. 1993. *Master's Thesis, Department of Geography, University of Kansas.*

USGS Generates Digital Maps for Thematic Cartographic Projects. 1993. *Geo Info Systems* 3(1): 36-41.

Several articles each year in: *NCGE Perspective, Spatial News, AAG Cartography Specialty Group Newsletter, Colorado Geographic Alliance News*, and other newsmagazines.

Standing Rock Sioux and Rosebud Sioux GIS Workshops, South Dakota GIS Workshops for Educators, 2004.

- Created and conducted workshops in the use of GIS for tribal, scientific, and educational applications at two tribal headquarters and at the South Dakota Department of Education.

Spatial Education Coordination with Orton Family Foundation, 2000-2004.

- Coordinated curriculum development and training for educators with the Orton Family Foundation's Community Mapping Program.

Virtual Immersion in Science Inquiry for Teachers, 1998-2003.

- Conduct workshops in the use of GIS for science and geography teachers in this NSF-sponsored project, contribute to online collaboratory of learners, serve on advisory board to review new proposals.

Exploring Biodiversity Along Colorado's Front Range, 2000-2003.

- Conduct workshops in the use of geographic techniques in biology education, write curricula using GIS, and serve on advisory board in this NGS-funded project.

Geography Education Magazine for Science (GEMS), 2002-2004.

- Sought and received National Geographic Society funding for this electronic magazine portal to federal educational resources; advise web designer; create content and publicize the magazine.

International Geographical Union, 2003.

- Present paper on the interaction between GIS and citizenship education at the IGU's Commission on Geographical Education conference, University of London.

New Zealand Geographical Society, 2003.

- Conduct workshops across New Zealand for instructors integrating GIS technology and methods into their curricula.

National Indian Education Association, 2001-2003.

- Conducted presentations on cooperative agreement between USGS and Rosebud Sioux; on GIS in Native American education, and hands-on GIS workshops.

Association of American Geographers, 1995-2004.

- Presented papers on Exploring Biodiversity Along the Front Range, Analyzing State Population Centers from 1900 to 1990, and other geographic research.

ESRI User Conferences, San Diego, California, 1998-2004.

- Presented papers and user demonstrations on implementing and assessing GIS in the secondary school curriculum; operated USGS exhibits; organized map gallery.

National Council for Geographic Education, 1995-2004.

- Elected to NCGE Executive Board, Research and External Relations Committee , 2002-2004. Create and maintain educational partnerships between NCGE and other educational organizations. Conducted presentations and workshops on GIS in education, exploring the cultural and physical landscape using topographic maps and imagery, teaching about glaciation and karst, and geography field work modeled after the "Land Use UK " national survey.

International Conference on GIS In Education, San Bernardino, California, 2000.

- Presented papers and workshops on implementing and assessing GIS in education operated a USGS exhibit.

World 2000 Conference on Teaching World History and Geography, University of Texas, 2000.

- Conducted presentation on using GIS to teach university-level world history and geography.

Jefferson County, Adams-12, and Horace Mann Middle School, Educational GIS Implementation Projects, Colorado, 1996-2001.

- Co-wrote three approved grants, created natural hazards, oil, county demographics, and neighborhood analysis GIS-based lesson modules, and instructed teachers and students in those modules in science and social studies classes.

First GIS Institute for Preservice Educators, Roger Williams University, 1999.

- Trained Department of Education faculty from across the USA on GIS in the first institute for education faculty who train teachers.

First and Second National GIS Institutes, Texas State Workforce Development Program, Southwest Texas State University, 1998, 1999, and 2003.

- Co-trained primary through university-level instructors from across the USA and Canada in GIS techniques in the first such institutes ever conducted.

Satellite Broadcast, Southwest Indian Polytechnic Institute, Albuquerque, 1999.

- Participated in broadcast to all Native American colleges and universities about applications of GIS on tribal lands and in tribal schools.

Native American GIS / Internet Institute, Northern Arizona University, 1999.

- Co-trained 15 Native American educators and tribal environmental professionals across the USA and Canada in GIS and Internet techniques.

Intermountain GIS Conference, Idaho Falls, Idaho, 1999.

- Conducted poster session and presentation on GIS in education challenges and successes.

GIS For Educators Courses, University of Denver and Colorado School of Mines, 1999-2002.

- Co-conducted institutes for Colorado K-12 teachers in ArcView GIS.

Association for Educational Communications and Technology Conference, 1999.

- Conducted workshop on pedagogical implications of the use of GIS.

Western Social Science Association, 1998.

- Presented research on population polarization on the Great Plains.

Geo-Tech Conferences, Dallas, Texas, 1997-2004.

**Recent
Research
and
Curriculum
Development
Projects**

- Conducted workshops and field trip for educators on technology in geography education, field work, teaching about Antarctica, and the use of topographic and thematic maps to uncover mysteries in the cultural and physical environment.

Annual Meeting, Geological Society of America, 1996-2002.

- Co-conducted workshops for teachers with ESRI on geographic information systems, topographic mapping, and using geologic resources in education.

Mapping the Colorado Standardized Achievement Program (CSAP), 2003.

- Examine the spatial patterns of Colorado's standard achievement test scores at different scales and grade levels. With Sophia Linn (Colorado Geographic Alliance) and Rick Gindele (Smoky Hill High School).

The Implementation of GIS Technology and Methods in Education. 2003.

- Survey and analysis of how and why educators who have attended a GIS training have implemented GIS into their curricula. With Anita Palmer (University of Nevada-Reno) and Tom Baker (University of Kansas).

Exploring Biodiversity in the Denver Metropolitan Area, 2000-2002.

- Research project, teacher training institutes, and development of lessons that examine open space, population growth, and diversity of plant and animal species, to illustrate that geographic concepts can be effectively taught in biology courses.

Historical Floodplains Along the Rocky Mountain Front Range, 2001-2003.

- Lessons that use historical and current aerial photography, local building and floodplain data, and ground photograph to analyze the real threat of floods along with land use issues. With Steve Wanner, Boulder High School.

Retail Spatial Diffusion Modeling, 2002.

- Create lessons that use GIS and historical point data to examine point diffusion across the country using Sonic Drive-In as the model.

Exploring the Titanic Using GIS, 2002.

- 210 question, 80-page, 17-part unit that uses GIS to examine the route, sinking, rescue, and discovery of the ocean liner *Titanic*.

Mapping the Future with USGS Educational Resources, 1996-2003.

- Examined and tested USGS resources for earth science and geographic education, including the development of digital datasets and lesson modules.

Site Selection for Rare Plants, Loess Hills, Nebraska, 1998-2002.

- Lessons focused on selecting sites to study rare species in the Loess Hills using GIS.

State Historical Population Centers, 2001-2002.

- Co-developed methods (with ESRI) and examined social and economic reasons for shifting changes in population centers in each state.

Geography Awareness Week Flyer and CD-ROM, 2000.

- Research and production of flyer and CD-ROM for 150,000 geography educators worldwide.

The Polarization of the Great Plains, 1920-1990. 1998. University of Colorado.

- Analysis of population decline and redistribution on the Great Plains.

GIS and Societal Interaction Through Geographic Education. 1997-1999. University of

Colorado.

- Explored influences of GIS in education by societal forces, and influences on society and education by GIS technology and methods.

Creation of, maintenance of, and training of data users in Internet spatial data access. 1995-2003. USGS and University of Colorado-Boulder.

- Create and maintain Internet resources for Colorado Geographic Alliance. Create and maintain RockyLink, a geospatial resource center. Train data users in Internet tools to access and use geospatial data sets. Conducted Internet workshop at GIS In The Rockies conference, Finding Geospatial Data on the Internet classes, and creating web resources classes at USGS.

Multimedia Authoring Evaluation. 1996.

- Researched multimedia authoring packages for digital resources.

Production of CD-ROM for GIS-based research in Alaska. 1995.

- Researched, created, and presented the first Rocky Mountain Mapping Center demonstration CD-ROM containing digital spatial data, metadata, viewing packages, standards, and applications to educate data users and market programs for potential federal, state, and local cooperators.

Redesigning USGS Graphic Map Products. 1994-1995. US Geological Survey.

- Researched, designed, and tested methods for redesign of USGS 1:24,000-scale and 1:100,000-scale maps. Created all redesign with Arc/Info and AML.

Developing a Marketing-Demonstration for DLG-E Data Model. 1994-1995. USGS.

- Developed GUI's that illustrated the advantages of the feature-based digital line graph "enhanced" model over the spatial-based model and the applications of DLG-E data.

The Impact of Freeways on Urban Environments. 1993. University of Kansas.

- Developed field and GIS-based research tools to analyze the economic and social impacts of freeways in time and space in urban neighborhood.

Grants and Awards

Geography Education Magazine of Science. 2002. \$2500. National Geographic Society Education Foundation.

NCGE Dissertation Award. 2001. \$500. One of two recipients.

ESRI Special Award for Outstanding Contribution to GIS. Given at ESRI User Conference, 2000. Sole recipient.

Geospatial Information Technology Association. Research Grant. \$1,000. Sole recipient.

Boulder Valley School District, Tech 21 Grant. 1999. \$10,000. Co-Principal Investigator.

Red Rocks Community College. 1999. Proposal for GIS Certificate Program. \$1,000. Co-Principal Investigator.

National Geographic Society Education Foundation. 1997 and 1999.

Jefferson County and Adams 12 School Districts. \$25,000 and \$30,000.

Assist in grant writing and partner in training and other project support.

Human Resources Initiative, US Department of the Interior. A Sharable USGS Central Region Visitors Center. FY 1999. \$49,500. Principal Investigator.

Human Resources Initiative, US Department of the Interior. A Scientific CD-ROM for the 1999 Geography Awareness Week Packet. FY 1999. \$20,000. Principal Investigator.

ESRI / International Geographic Information Foundation. 1998. Research Grant. \$1,000. Sole recipient.

Geographic Education National Implementation Project. 1998. Dissertation Grant, \$2,000. Sole recipient.

National Geographic Society Education Foundation. 1998. Smoky Hill High Sch., \$7,500. Assist in grant writing and partner on project.

Geospatial Information Technology Association [AM/FM International]. 1997. Ed Forrest Award, \$2,000. Sole recipient.

National Geographic Society Education. 1996. Horace Mann Middle School, Denver. \$10,900.

Memberships

Association of American Geographers [AAG]	1992-present
Geography Education Specialty Group Secretary-Treasurer	1998-2000
Specialty Groups: Education, GIS, Cartography, Cultural Geography	
National Council for Geographic Education [NCGE]	1995-present
Board Member, Research and External Relations	2002-2004
Colorado Geographic Alliance [COGA]	1995-present
Board of Directors	2001-present
Association for Supervision and Curriculum Development (ASCD)	2001-2002
Geographical Association (UK)	2001-present
Colorado Scientific Society [CSS]	1990-present
Geological Society of America [GSA]	1998-1999
National Geographic Society [NGS]	1987-present
National Speleological Society [NSS]	1993-present
Southwest Arc (ESRI) Users Group	1989-present
Urban and Regional Information Systems Association [URISA]	1993-1998

References

Dr. A. David Hill
 Professor Emeritus
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Ms. Anita Palmer
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 1409 S. Lamar - Loft 438
 Dallas TX 75215
gisetc@aol.com

(214) 485-3819

Mr. George Dailey
ESRI, Inc. - 3109 Knox St - Suite 303
Dallas TX 75205
(214) 599-0894
gdailey@esri.com

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Dr. Jean Palmer-Moloney
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