

STEVEN R. HICK
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Work Experience

Lecturer and GIS Director (2008-present), University of Denver

Teach at the undergraduate and graduate level. Teaching responsibilities include courses in techniques and applications of geographic information science. Teaching load of three courses per academic year taught on campus and three courses per academic year taught online.

Responsible for the online master of science degree in geographic information science program to ensure the quality of the curriculum, faculty, instruction; to manage the budget of the program area; to ensure growth and financial success; to represent the area in appropriate Department of Geography and the University of Denver events, meetings, activities; and to provide leadership and strategic planning for the program area.

GIS Academic Director (1994-present), University of Denver

Direct activities of the University College GIS Certificate Program. Conduct scheduling of classes and other administrative duties. Provide academic advising and career counseling services to prospective and active students. Teach introductory GIS courses as well as advanced courses on GIS project management, planning, design, and implementation, cartographic design and map production, ArcInfo GIS software, technology integration, crime mapping and analysis, and public domain data.

Director, Geographic Technology Application Center (GTAC), University of Denver (2004-present)

Director of research and outreach initiative at the University of Denver. Launched in April 2004, GTAC's mission is to bring expertise to the global market-place through workshops, technical assistance, spatial data warehousing, idea incubation, and spatial information and knowledge management. To date we have conducted several hands-on GIS workshops in conjunction with the state GIS coordinator and we are establishing the spatial data warehouse for the State of Colorado.

State GIS Portal Project Profile (2007)

The Geographic Technology Application Center (GTAC) at the University of Denver contracted with the State GIS Coordinator in the State of Colorado Department of Local Affairs to rebuild and host the state GIS portal. Formerly housed in the State Library, the servers and software licenses were transferred to the University of Denver in February 2007. Work then commenced on rebuilding the GIS portal based on ESRI's Spatial Data Portal Toolkit. Java scripted application pages were designed and the resource inventory database was built in Microsoft SQL Server. The final major task was to integrate the portal with the DU spatial data repository made accessible in the EarthWhere application from SANZ, Inc. Upon completion of the project, registered users have access to important state information regarding GIS and access to approximately four terabytes of spatial data.

GIS Director and Senior Research Associate (1994-present), University of Denver, Denver, Colorado

Responsible for conducting and coordinating GIS education and research activities for the University of Denver. Provide wide range of consulting services for clients contracting with the University. Direct the activities of the W.M. Keck Geoscience Center including the GIS Laboratories. Oversee computer operations consisting of UNIX computers and personal computers. Software inventory and expertise includes workstation ArcGIS, ArcIMS, ArcView, ArcInfo, ArcCAD, AutoCAD Map, MapInfo, and ERMapper. Manage and supervise ESRI university site license.

Supervise GIS Lab Manager, graduate students, work-study students, lab assistants, and contract employees.

Project/client list includes Water and Waste Engineering, Inc., University of Denver Facilities Management Department, the City of Pueblo, Colorado Police Department, the National Law Enforcement and Corrections Technology Center, and the National Park Service. Other recent research projects include serving as Principal Investigator with Lockheed-Martin Corporation to perform and develop Advanced Traffic Management System Study (ATMS). Purpose of ATMS is to provide GIS interface for Colorado Department of Transportation Traffic Management System.

Crime Mapping and Analysis Instructor

Taught Crime Mapping and Analysis Program in conjunction with National Law Enforcement and Corrections Technology Center (NLECTC), a National Institute of Justice program based at the University of Denver. Developed and delivered five-day crime mapping and analysis training in ArcGIS 9.x and 8.x, ArcView 3.x and MapInfo for law enforcement officers and crime analysts from across the country. To date have conducted training for over 1000 officers and analysts from over 500 agencies.

Crime Mapping and Analysis Technical Assistance

Provide onsite technical assistance and strategic planning activities as required for agencies requesting help at the University of Denver. Provided assistance to all city police departments and county sheriff departments for 10-counties in the Kansas City metropolitan area. The project resulted in an internet-based geographic information system for analysis of Part I crime data across the region by participating agencies. Similar work initiated for Greater Boston Crime Analysis Project (GBCAP) working with Newton, Waltham, Watertown, Cambridge and Brookline, Massachusetts.

Greater Boston Crime Analysis Project Profile (2003-2004)

The Greater Boston Crime Analysis Project (GBCAP) was organized under a technical assistance agreement with the National Law Enforcement and Corrections Technology Center at the University of Denver. The project was funded with a Homeland Security grant to the lead law enforcement agency, the City of Newton, Massachusetts Police Department with active participation by the cities of Brookline, Waltham, Cambridge, and Watertown.

The purpose of the project was to develop a web based application to facilitate access to and sharing of crime data between disparate datasets at the participating law enforcement agencies. Simply put, a complex application was developed that extracted at regular intervals text files of the crime data from each participant's record management system. Data was extracted, normalized and compiled for review and query by each agency. Agencies could then capture and download crime data based on simple queries or spatial queries to analyze crime across civic boundaries. Data was available in text files, Excel spreadsheets, Access database tables, and XML format.

Adjunct Faculty – Department of Geography, University of Denver

Responsible for teaching undergraduate- and graduate-level computer cartography and geographic information systems classes. Courses include Map Reading and Analysis, Introduction to Cartography, Advanced Computer Cartography, Introduction to Geographic Information Systems, Advanced Geographic Information Systems, Applied GIS with Workstation ArcInfo, and GIS Project Design and Management. Primarily teach with ArcGIS (ArcView, ArcInfo) and MapInfo.

Courses Offered

- GEOG 2010 – Map Reading, Use and Analysis
- GEOG 2020 – Computer Cartography
- GEOG 2100 – Introduction to GIS

- GEOG 3010 – Geographic Information Analysis
- GEOG 3040 – GPS for Resource Mapping
- GEOG 3100 – Geospatial Data
- GEOG 3140 – Advanced Computer Cartography
- GEOG 3230 – GIS Project Management
- GEOG 3250 – Advanced GIS
- GEOG 3410 – Urban Applications in GIS
- GIS 4101 – Introduction to GIS
- GIS 4150 – GIS Project Management
- GIS 4503 – GIS Project Design
- GIS 4504 – Cartographic Design
- GIS 4530 – Crime Mapping and Analysis
- GIS 4550 – GIS Technology Integration
- GIS 4630 – Public Domain Data for GIS
- GIS 4690 – GPS for GIS

Previous Work History

Technical Consultant (1989-1994) UGC Consulting, Englewood, Colorado

Preparation and evaluation of analyses for feasibility and cost-benefit studies, base map requirements, and conversion specifications for land base and facility mapping projects. Provide technical support and assessment of municipal and regional requirements for incorporation of AM/FM/GIS technologies.

Developed a base of project experience, including multiparticipant, municipal, transportation, telecommunications, and gas and electric utility projects in the United States, Canada, and New Zealand. Served as Project Manager for the implementation of a multi-million dollar AM/FM/GIS project for Auckland City, New Zealand. Served as Project Manager for the feasibility studies performed for Summit County, Colorado, and for the City of Bismarck, North Dakota in conjunction with the Bismarck-Mandan Metropolitan Planning Organization (MPO). Provided data conversion management for a million-dollar data acquisition project at the City of Bloomington, Indiana, including management of quality control efforts. Served as Assistant Project Manager for the base-mapping project at the County of Maui, Hawaii, including providing quality control management services. For the City of Aspen/Pitkin County, Colorado, worked on the feasibility study, applications design, data conversion consultation and planning, strategic implementation planning, and project management. Assistant Project Manager for Dayton, Ohio, assisting with the feasibility study, applications design, data conversion consultation, and strategic implementation planning. Similar services provided to La Plata County, Colorado, and at the City of Phoenix, assisted with

data conversion specifications, source map analysis, and graphic specifications. For James City County, Virginia, provided services for their GIS/CAD (dispatch) integration for the Fire and Police Departments. Provided technical support in vendor evaluations for Riverside, California, Polk County, Iowa, and Des Moines, Iowa. Additionally, for the City of Baltimore, Maui County, and Hamilton-Wentworth, provided technical support for feasibility studies, applications design, and strategic implementation plans. Served as Project Manager in a joint study with several Canadian firms to determine the feasibility of a GPS Active Control System throughout British Columbia. At BC Hydro Transmission offered technical support for the feasibility study, cost-benefit analysis, applications design, and strategic implementation plan.

Teaching Assistant (1988) Department of Geography, The University of Texas at Austin, Austin, Texas

Responsible for maintaining department computer cartography and GIS lab. Developed and delivered training with computers and software. Knowledge of operations in IBM 3081 and 4341 mainframe computers. Mapping software experience included AutoCAD, ATLAS*GRAPHICS, MAPEDIT, SAS and SASGRAPH. Geographic Information System experiences included Map Analysis Package (MAP), IBM Graphics Program Generator, and Geographic Facilities Information System.

Lecturer (1986-1988) Division of Social and Policy Sciences, The University of Texas at San Antonio, San Antonio, Texas

Taught upper division cartography courses providing a thorough understanding of the principles required for map production. Course instruction included principles and theory of modern cartography, discussion of projections, coordinate systems, photogrammetry, air photo interpretation, remote sensing, cartographic methods, drafting techniques, and computer cartography. Also taught Fundamentals of Geography and Conservation of Natural Resources.

Cartographer (1985-1988) Defense Mapping Agency, San Antonio, Texas

Responsible for cartographic production, revision, and editing of numerous map products at large, medium, and small scales. Analyzed source material and imagery captured by remote sensing utilized in cartographic compilation. Also responsible for planning and implementing a 600-hour training program in mapping, charting, and geodetic disciplines for new agency employees.

Maintained top-secret security clearance with access to sensitive compartmentalized information.

Professional Service

Geospatial Information Technology Association (GITA) Geospatial workforce thought leaders meetings, October 2006 & January 2006 to address geospatial workforce needs and directions for the 21st century. Meetings and taskforce funded by Department of Labor grant.

GIS Colorado – board member and president of statewide GIS professional organization. Organize and lead quarterly board and membership meetings. Supervise projects adopted by the organization and set strategic direction for the future of the organization.

Volunteer with Denver Police Department – provide volunteer help to crime analysis unit of the Denver Police Department.

Professional Affiliations

American Society for Photogrammetry and Remote Sensing (ASPRS)

Association of American Geographers (AAG)

Geospatial Information & Technology Association (GITA)

GIS Colorado

International Association of Crime Analysts (IACA)

Urban and Regional Information Systems Association (URISA)

Education

MA Geography, University of Missouri, 1983

BS University of Missouri, 1981

Postgraduate study, Geographic Information Systems and Remote Sensing, The University of Texas at Austin, 1988

Basic Cartography and Related Mapping, Charting, and Geodesy Disciplines. Defense Mapping Agency, 1985.

Research Interests

- Crime mapping and analysis
- Transportation geography (airlines and airline service to small communities, passenger rail service)
- GIS database development and maintenance

- GIS education
- Applied GIS applications

Professional Service

- Member of the State of Colorado Geospatial Information Advisory Council (2007-present)
- Volunteer, Denver Police Department (2005-present)
- US Department of Labor and Geospatial Information Technology Association (GITA) GeoSpatial Roundtable Thought Leader Participant, 2006-2007.

Graduate Academic Advising

Abeloe, Ryan. Crime and Light Rail in Denver, 2009.

Anderson, Elthron. Face recognition and spatial referencing, 2008.

Gall, Megan. Panhandling and crime in the City of Denver, 2007.

VanAuken, John. Spatial forecasting, 2006.

Grubb, Christopher. Web-based data sharing for the Kansas City Regional Crime Analysis Geographic Information System (KCRCA GIS), 2005.

Boesch, William, University of Denver Campus Mapping Project, 2004.

Ernenwein, Eileen, Partners in Scholarship, 1999.

Seidl, Ann, Geographic Resources for the Information Professional, 1997.

Professional Publications

Hick, Steven. Naturally Occurring Retirement Communities along the Front Range of Colorado Atlas. Jewish Family Service of Colorado, 2008.

Bruce, Christopher, Steven Hick and Julie Cooper,. "Exploring Crime Analysis." International Association of Crime Analysts, 2004.

Hick, Steven. "Colorado Department of Transportation Traffic Operations Center Prototype Database Design and Development." Proprietary report prepared for Lockheed Martin Corporation, August 1995.

Dooley, Frank J. and William E. Thoms. Railroad Law: A Decade After Deregulation. Westport: Quorum Books, 1994. *Contributing author*.

Hick, Steven. "ATMS Study Final Report." Proprietary report prepared for Lockheed Martin Corporation, December 1994.

Montgomery, Glenn E. and Harold C. Schuch. GIS Data Conversion Handbook, Fort Collins: GIS World, Inc., 1993. *Contributing author.*

Hick, Steven R., Cryderman, C.S., and Janes, H.W. *British Columbia Active Control System Application Definition and Feasibility Study*, Ministry of Environment, Land and Parks, Victoria, British Columbia, 1992.

"Providing Consulting Services on Transportation-Related GIS Projects."
Proceedings of the Transportation Research Forum, Volume 6, 1992.

Review of Analytical and Computer Cartography, by Keith C. Clark. *URISA Journal*, Spring 1991.

"GIS Hardware and Software for Today and Tomorrow." Texas Chapter of the American Society of Civil Engineers. Arlington, Texas. April 1991.

"On Computers: The Year of the Tiger." *Journal of the American Planning Association*, May 1990.

A Base Mapping Study for Duval County, Texas. Texas Center for Economic Development, 1987.

Professional Presentations

"Evaluation of Spatial Forecasting Techniques used in Tactical Crime Analysis."
Presented at 2005 Crime Mapping Research Conference, Savannah, Georgia.

"Density Mapping." Presented at 2005 Massachusetts Association of Crime Analysts Conference, May 19, 2005.

"Crime Mapping with MapInfo." Crime Mapping and Research Conference, Orlando, Florida, December 1999.

"Crime Mapping and Analysis." Southwest Regional ArcInfo Users Group Conference, Breckenridge, Colorado, October 1999.

Crime Mapping Basics." GIS in the Rockies Conference, Denver, Colorado, October 1999.

"Airline Service and Local Economies in Small Communities in Colorado in an Era of Deregulation." Proceedings of the 1999 Association of American Geographers Conference, Honolulu, Hawaii. March 1999.

"GIS Education in the Rockies." Proceedings of the 1997 ESRI User Conference, San Diego, California. July 1997.

"Data Maintenance in the GIS Workplace." Presented to the Colorado Springs Joint Participant Education Group (JPEG) GIS Professionals, October 1996.

"The Role of Geographic Information Systems in Ecological Restoration."
Proceedings of the High Altitude Revegetation Workshop, No. 12, June 1996.

"Geographic Education in Our Dynamic Environment." Presented at GIS in the Rockies, September 1995.

"GIS for County Assessors." Presented to Iowa Association of Assessors, October 1992.

"GIS Education at the University of Denver." Presented at "GIS in the Rockies," September 1994.

"Twenty Years of Amtrak." Paper presented at Western Social Sciences Conference, Denver, Colorado, March 1993.

"Global Positioning Systems and an Active Control System - The Future of Geographic Positioning." Presented at GIS in the Rockies, October 1992.

"Crime Mapping and Analysis." 1998-2006. Numerous presentations over the years at conferences and at law enforcement agencies by invitation.