



**Spatial Perspectives on Analysis
for Curriculum Enhancement**



***SPACE* Workshop
Santa Barbara, California
12-23 July 2004**



Center for Spatially Integrated Social Science



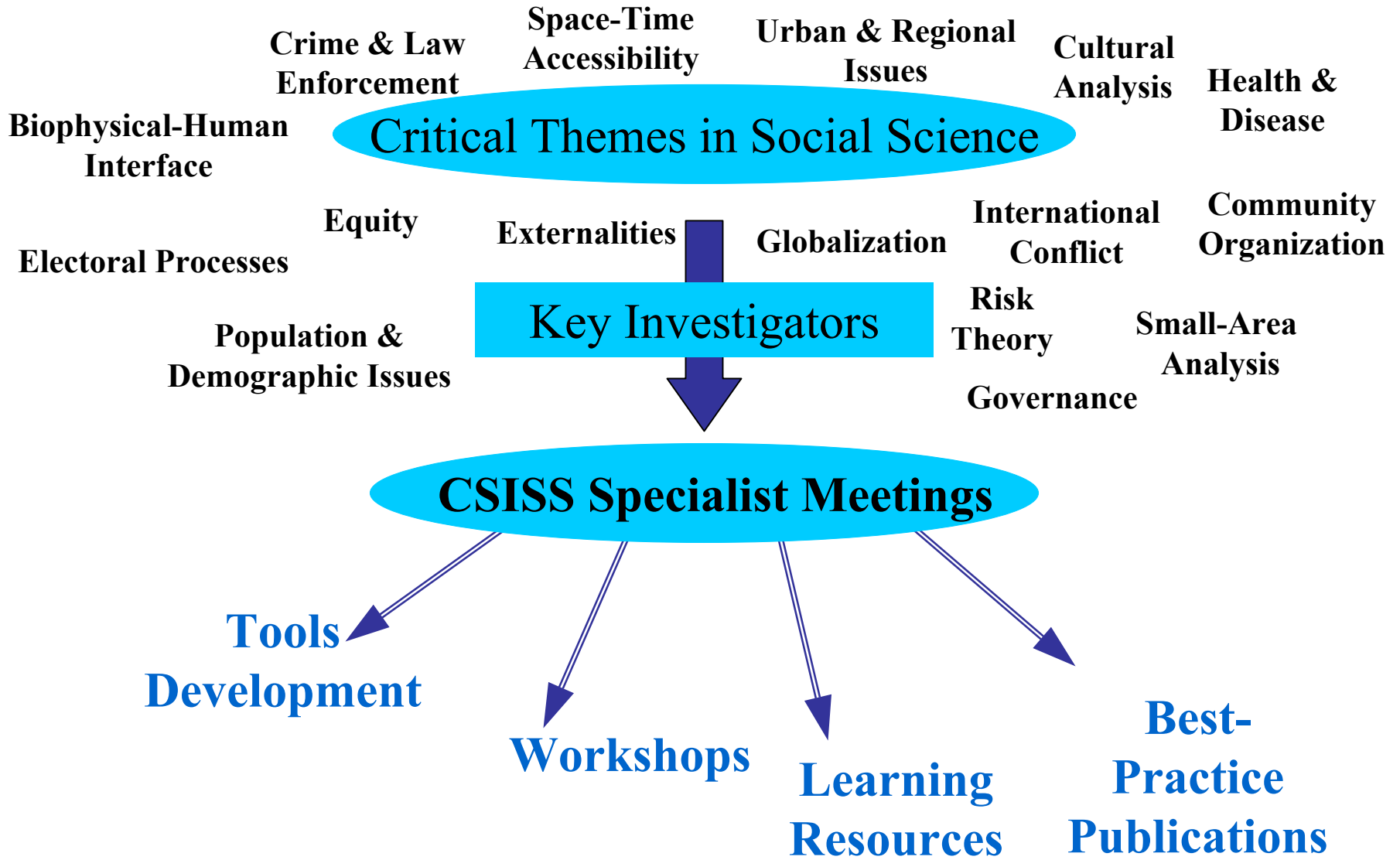
The CSISS Mission recognizes the growing significance of space, spatiality, location, and place in social science research. It seeks to develop unrestricted access to tools and perspectives that will advance the spatial analytic capabilities of researchers throughout the social sciences. CSISS is funded by the [National Science Foundation](#) under its program of support for infrastructure in the social and behavioral sciences.

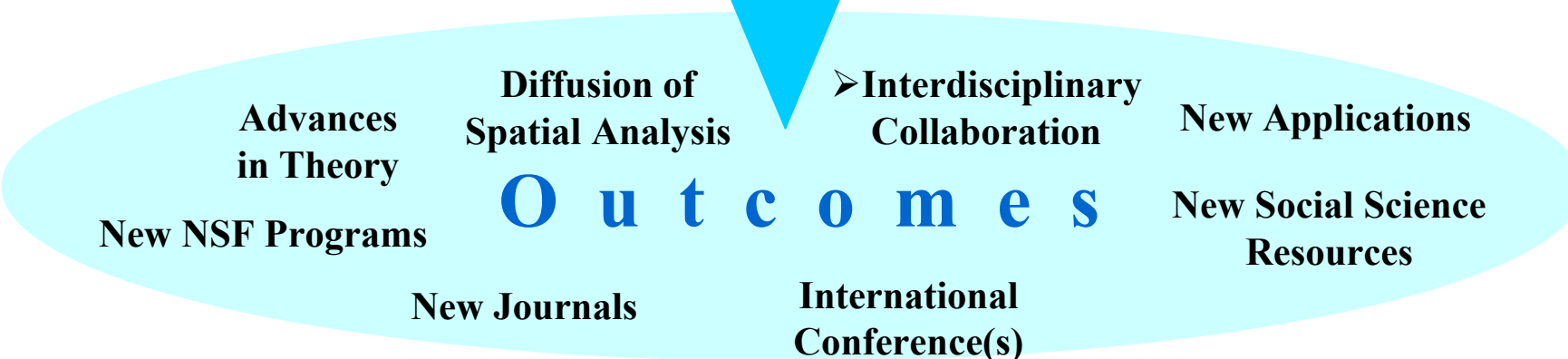
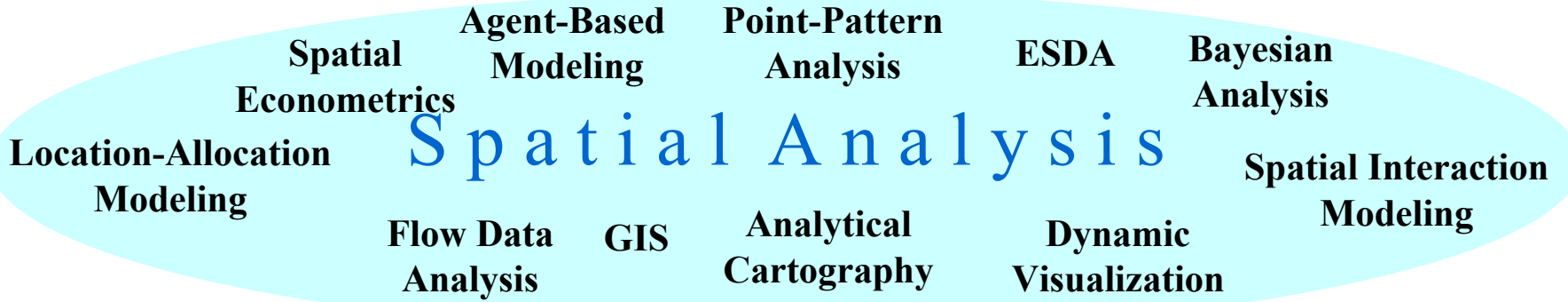
CSISS News

[CSISS Workshop at ASA 2003 Annual Meeting](#)

Core Programs	Learning Resources	Spatial Resources	Spatial Tools
<p>These six infrastructure programs form the core of the Center's activities.</p>	<p>CSISS Classics GIS Cookbook ARGUS Activities & Readings</p>	<p>CSISS has compiled e-journals, bibliographies, and other spatial resources for the social sciences.</p>	<p>Here's where you'll find information about software for the exploration and analysis of spatial data.</p>
Search Engines	<p>NCGIA Core Curriculum ▶ Course Syllabi ▶ Workshop Video Clips ▶ Presentations ▶ and specialist meetings.</p>	Community Center	About CSISS
<p>Try out one of our custom search engines to find spatial analysis resources on the Internet.</p>		<p>Join the forums, or if your organization relates to our mission and goals, register as a CSISS affiliate.</p>	<p>CSISS personnel, news, site map and FAQ. Our Strategic Plan and Annual Reports are also found here.</p>

[Core Programs](#) | [Learning Resources](#) | [Spatial Resources](#) | [Spatial Tools](#) | [Search Engines](#) | [CSISS Events](#) | [Community Center](#) | [About CSISS](#)
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SPACE

Spatial Perspectives on Analysis for Curriculum Enhancement

- NSF CCLI-National Dissemination Program /
Initiated 1 October 2003
- Consortium: UCSB, Ohio State University, UCGIS
- PI: D Janelle / Co-PIs: M Goodchild and R
Appelbaum
- Partner PIs: M-P Kwan (OSU) / A Getis (UCGIS)



Why *SPACE*?

- Spatial thinking should be one of the foundations for general undergraduate education (for informed citizenship and for information analysis and assessment)
- Spatial perspectives provide a means of integrating theory within and across disciplines, and for matching it with evidence
- Spatial analysis can serve as a foundation for interdisciplinary cooperation (e.g., the coupling of environmental and social processes)



SPACE Goals

- Facilitate undergraduate faculty development in spatial social science
- Expand curricula resources in spatial social science
- Provide follow-through professional development
- Achieve diversity in access to educational opportunities
- Establish and encourage support networks
- Foster technology integration
- Promote discipline integration
- National dissemination



The *SPACE* Program

- National Education Workshops
- Academic Conference Courses to Enhance Spatial Science (ACCESS), Years 2 and 3
- On-line Resources for Lab Exercises, Data Sets, Test Items, Syllabi, Assessment Tools, and Related Resources



CSISS Workshop Participants 2000 -2003

Discipline	Attendees				Totals
	2000	2001	2002	2003	
Economics	9	12	7	7	35
Political Science	14	5	4	9	32
Sociology	11	13	9	11	44
Anthropology	5	12	10	6	33
Geography	17	20	22	20	79
Public Policy	2	8	4	1	15
Urban Studies/Plan	3	6	3	8	20
Statistics	3	2	0	2	7
Criminology	3	6	3	1	13
Population/Health	1	12	6	24	43
Other, Social Science	1	5	3	4	13
Other, not Social Science	3	2	1	0	6
	72	103	72	93	340

SPACE Workshop Content Themes

- Geographic Information Systems
- Spatial Pattern Analysis
- Spatial Econometrics
- Map Making and Cartographic Visualization
- Spatial Interaction
- Agent-Based Modeling
- Place-Based Search
- Applications



CSISS Instructional Resources Ready for Use

- *Spatially Integrated Social Science*
- Syllabi collection by social science discipline
- *CSISS Classics*
- *GIS Cookbook*
- Software (download free):
 - *GeoDa*
 - *Flow Mapper*
- Workshop video clips

www.csis.org



CSISS Best Practice Publications



See <http://www.csiss.org/best-practices/siss/> for objectives, chapter abstracts, & related resources

Oxford University Press, January 2004

Publication to follow SISS:

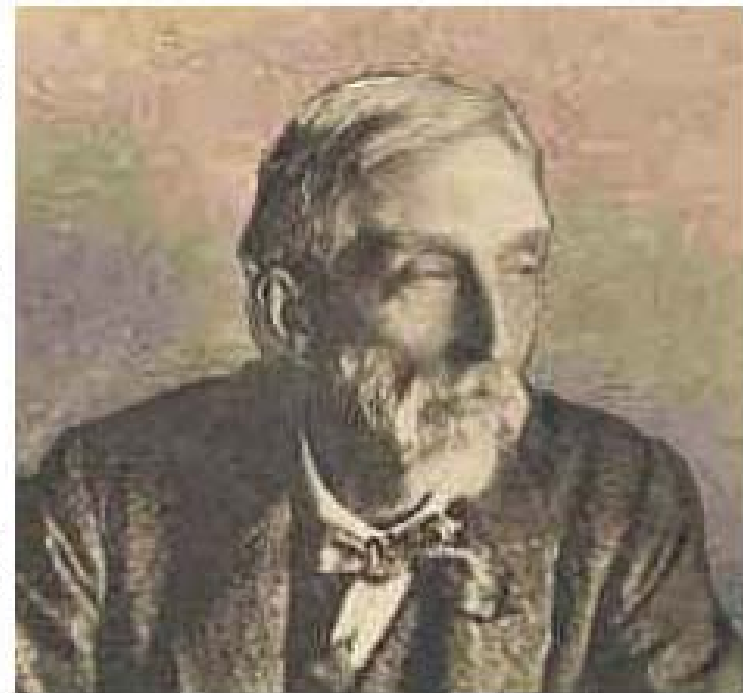
L Anselin, S Rey and R Florax, eds. *Advances in Spatial Econometrics* Springer, Fall 2004

CSISS Classics

Charles Booth: Mapping London's Poverty, 1885-1903 By David Fearon

Background

Between 1886 and 1903 Charles Booth produced a remarkable series of maps of London carefully coded for social class with data gathered by visiting, literally, every street in London. Equally remarkable, Booth devised, funded a research team, and conducted the study in his spare time while running a successful international leather trade and steamship company. In the 1880s, the question of increasing poverty in an increasingly wealthy Industrial-age Britain was becoming more central to citizens, politicians and philanthropists. A series of riots and sensational journalism sparked fears of social unrest. Booth encountered the squalid conditions of London neighborhoods while campaigning for an unsuccessful





[Charles Booth Online Archive](#) at the British Library of Political and Economic Sciences

Publications

Booth, Charles. "The Inhabitants of the Tower Hamlets (School Board Division), Their Condition and Occupations." *Journal of the Royal Statistical Society* 50 (1887): 326-401.

Booth, Charles. "Condition and Occupations of the People of East London and Hackney, 1887." *Journal of the Royal Statistical Society* 51 (1888): 227-45.

Booth, Charles. *Labour and Life of the People* (2 volumes, plus maps under



CSISS Classics - Spatial Thinking in Sociology

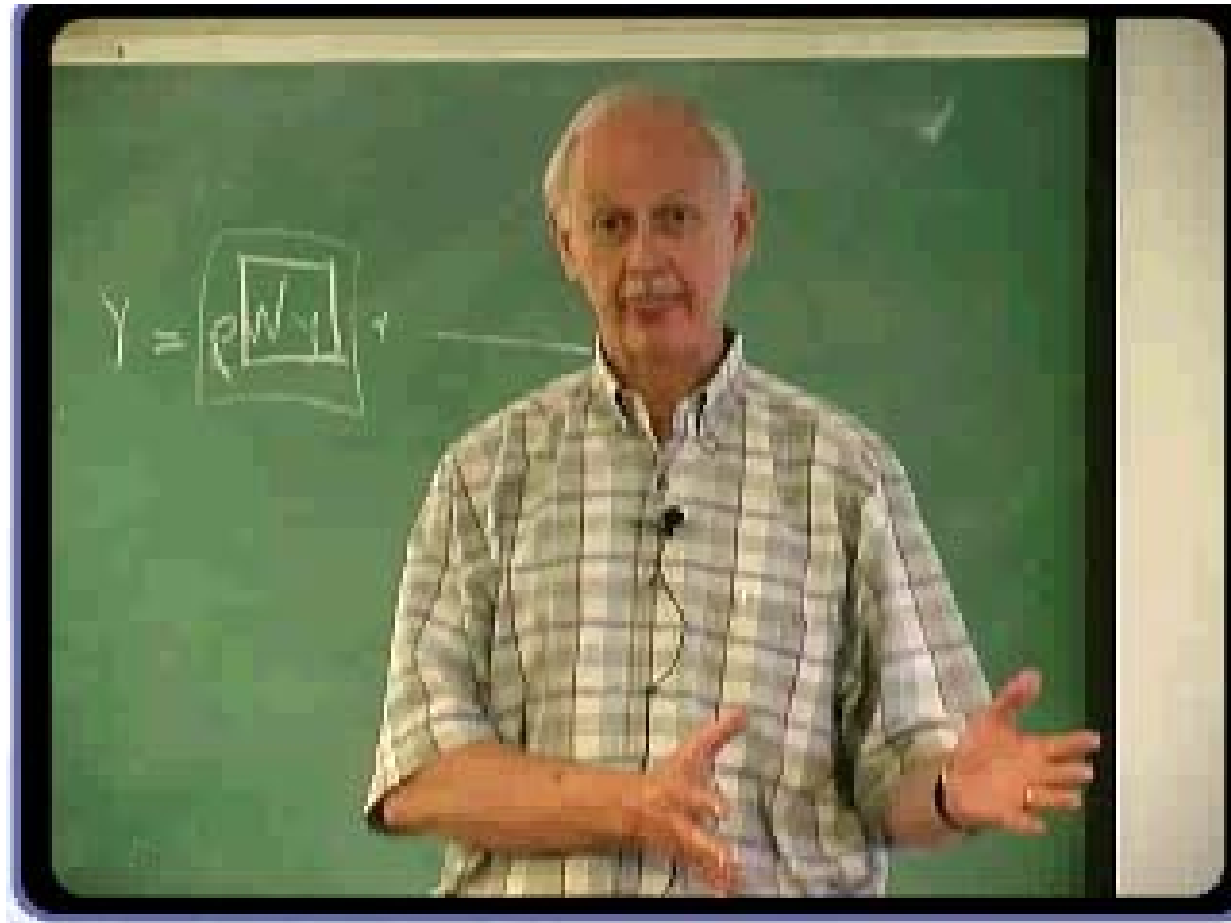
- Charles Booth, Mapping London's Poverty, 1885-1903
- Patrick Doreian on Linear Models with Spatially Distributed Data
- Florence Kelly, Slums of the Great Cities Survey Maps, 1893
- Colin Loftin and Sally K. Ward, Application of Spatial Autocorrelation in Sociology
- Henry Mayhew, London Labour and the London Poor, 1861
- Robert Park and Ernest Burgess, Urban Ecology Studies, 1925
- Clifford R. Shaw and Henry D. McKay, Social Disorganization Theory
- Georg Simmel, The Sociology of Space
- Alma and Karl Taeuber, Residential Segregation in U.S. Cities
- Alfred Weber, Theory of the Location of Industries, 1909

Under development:

- William G. Skinner, Marketing and Social Structure in Rural China
- Shevky, Williams, and Bell, Social Area Analysis and Factorial Ecology



Video clips of CSISS summer workshops



Demographer **John Weeks** -- fertility in rural areas of Egypt
CSISS summer workshop 2002

CSISS Video Clips of Summer Workshops

[Download Flash player now.](#)

Introduction to Spatial Pattern Analysis in a GIS Environment

The Nature of Spatial Pattern Analysis
Art Getis

Time: 9:58
Quality: [High](#) - 31MB

Problems Associated with Spatial Pattern Analysis
Art Getis

Time: 9:43
Quality: [High](#) - 31MB

An Introduction to GIS
Mike Goodchild

Time: 7:29
Quality: [Audio Only](#) - 2MB

GIS Functionality
Mike Goodchild

Time: 9:58
Quality: [High](#) - 33MB

Current Technologies in GIS
Mike Goodchild

Time: 14:54
Quality: [High](#) - 48MB

Spatial Patterns of Birth Data
John R. Weeks

Time: 15:42
Quality: [Audio Only](#) - 5MB

Spatial Patterns of Fertility in Egypt
John R. Weeks

Time: 10:18
Quality: [High](#) - 32MB



GIS Cookbook: Introduction



The GIS Cookbook is a collection of simple descriptions and illustrations of GIS methods written with minimal GIS jargon. Recipes cover two GIS software platforms, ArcView 3.x and ArcGIS 8.x. The target users are social scientists with an interest in introducing spatial thinking into their current research and also having some experience with computers but little to no exposure to GIS. The GIS Cookbook is in its beginning stages and will be expanded to better serve the needs of social scientists.

GIS Cookbook Table of Contents

	ArcView 3.x	ArcGIS 8.x
1. Getting Started		
-> How to open a new project, new view, or existing project	3.x	8.x
-> How to add data after opening a new view	3.x	
2. Dealing with Data		
-> Importing an Excel table to your GIS project	3.x	8.x
-> Joining a table to an existing table	3.x	8.x
-> Classifying data	3.x	
3. Classifying and Visualizing Data		
-> Making a choropleth map	3.x	8.x
4. Projections		
-> Define projection for a shapefile or geodatabase		8.x
-> Reprojecting data	3.x	



CSISS Tools Clearinghouse

The *CSISS Tools Clearinghouse* is intended to grow into a robust collection of spatial analysis software, software links, and links to information about tools for spatial analysis. The development of these tools is a lively research area and the goal of this clearinghouse is to provide up-to-date information on available tools. The clearinghouse is comprised of:



- ◊ [Search Engine](#)

Search a continuously updated, comprehensive index of the CSISS Select Tools and Links to Portals.

- ◊ [Select Tools](#)

Browse through tools particularly suited to the analysis of spatial phenomena.

- ◊ [Portal Links](#)

A listing of useful collections of software tools for anyone interested in Spatial Analysis, or those looking for specific tools.

- ◊ [CSISS Tools](#) (offsite)

The home of the software tools development efforts under CSISS, carried out in the Spatial Analysis Laboratory of the Department of Agricultural and Consumer Economics at the University of Illinois, Urbana-Champaign.

New - [GeoDa 0.9](#), beta release software for ESDA with dynamically linked windows.

New - [R-Geo](#), a developing effort to promote spatial data analysis software in the R language.

A rectangular button with a light grey background and a thin border, containing the text 'Site Search' in a dark grey font.

Site Search



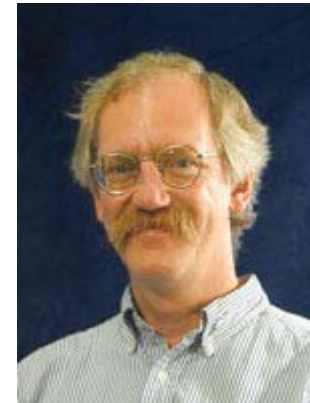
University of Illinois at Urbana-Champaign

SPATIAL ANALYSIS LABORATORY

Department of Agricultural and Consumer Economics

Download **GeoDa 0.9.5-i**

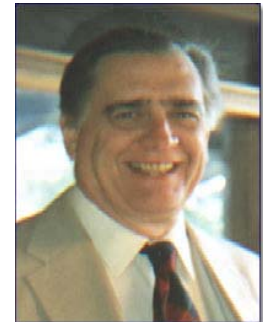
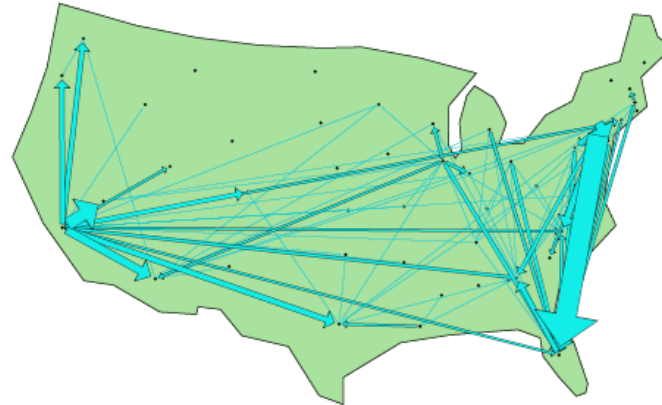
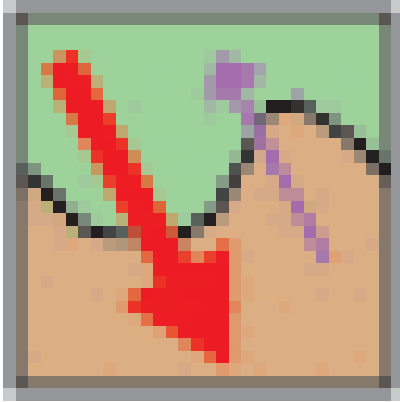
- Tutorials
- Sample Data
- Openspace Mailing List



Luc Anselin



Tobler's FlowMapper





SITE SEARCH

SPACE Discipline Resources

Disciplines >> GIS

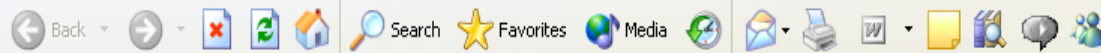
Categories

- ◁ Also see: GIS Syllabi

Links

- ◁ [Asian Spatial Information and Analysis \(ACAS\)](#) - Research institution specializing GIS databases for Asia and applied Viet Union.
- ◁ [Baltic Sea GIS, Maps and Statistical Database](#) - and other information for the Baltic Sea drainage basin, population
- ◁ [Colorado Office of Emergency Management: Cartography](#) - State and
- ◁ [Digital Chart of the World](#) - Download the best of different countries, in Arc/INFO export format.
- ◁ [Freedata.ca](#) - Dedicated to the issue of public access to government geospatial data across Canada. It is a place to discuss, issues, educate, coordinate and encourage change.
- ◁ [GIS Data Depot](#) - Provides free GIS data downloads and creates custom spatial data CD-ROMs.
- ◁ [Hawaii Statewide GIS Program](#) - Free downloadable GIS spatial data, metadata, and maps.
- ◁ [Infoshare: Community Data on New York City](#) - Profile and compare neighborhoods, and produce original tables.
- ◁ [Louisiana Statewide GIS](#) - Contains GIS and mapping data on the state of Louisiana

- [Anthropology](#)
- [Archaeology](#)
- [Criminology](#)
- [Demography](#)
- [Economics](#)
- [Environment](#)
- [GIS](#)
- [History](#)
- [Human Geography](#)
- [Political Science](#)
- [Public Health](#)
- [Sociology](#)
- [Spatially Integrated Social Sciences](#)
- [Urban Studies and Urban Planning](#)



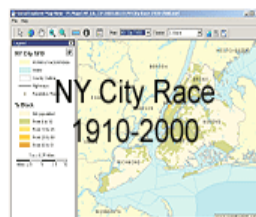
Social Explorer

Social Explorer is an organization that provides mapping products and services. By visually presenting data linked with geography, we help people visualize and understand data. Maps are an ideal tool for presentations, since maps provide a key tool in determining what the data means.

- Home
- Demography
- Dynamic Maps
- Static Maps
- Links
- About Us

Featuring Dynamic Maps

These interactive maps allow you to explore the way New York City and Los Angeles changed over time...



« GO »
use arrows to browse through available dynamic maps

[Explore Dynamic Maps](#)

Dynamic maps are an interactive way to learn about demography

[Explore Static Maps](#)

Static maps are a visual way to learn about demography

Social Research Office

Sociology Dept. of Queens College
65 - 30 Kissena Blvd.
Flushing, NY 11367
Tel: (718) 997 - 2837
Fax: (718) 992 - 2820

Our Sponsors

This project has received major funding by:





SPACE Teaching Materials

[Teaching Materials](#) >> [Student Learning Assessment](#) >> [College and University](#)

Links





- » [Field-tested Learning Assessment Guide \(FLAG\)](#) - Offers broadly applicable, self-contained modular classroom assessment techniques (CATs) and discipline-specific tools for STEM instructors interested in new approaches to evaluating student learning, attitudes and performance.
- » [Learning Through Technology](#) - Features information on using technology in the classroom, case studies, assessment tools, glossary, and links. Provided by the National Center for Science Education.
- » [Online Evaluation Resource Library](#) - This library was developed for professionals seeking to design, conduct, document, or review project evaluations. OERL's resources include instruments, plans, and reports from evaluations that have proven to be sound and representative of current evaluation practices.
- » [Teaching Goals Inventory Online](#) - A self-assessment of instructional goals. Its purpose is threefold: (1) to help college teachers become more aware of what they want to accomplish in individual courses; (2) to help faculty locate Classroom Assessment Techniques they can adapt and use to assess how well they are achieving their teaching and learning goals; and (3) to provide a starting point for discussion of teaching and learning goals among colleagues.



The time now is Thu Jul 08, 2004 6:11 pm

SPACE Forum Index

[View unanswered posts](#)

Forum	Topics	Posts	Last Post
Summer Workshops 2004			
 GIS and Spatial Modeling for Use in Undergraduate Education Columbus, OH: June 28 - July 2, 2004 Moderators janelle , mokelly , mkwan	4	10	Tue Jul 06, 2004 11:24 pm Guest →
 Spatial Analysis for the Undergraduate Social Science Curriculum Santa Barbara, CA: July 12-23, 2004 Moderators janelle , fabrikant	0	0	No Posts
 Spatial Analysis and GIS for Undergraduate Course Enhancement in the Social Sciences San Diego, CA: August 2-6, 2004 Moderator janelle	0	0	No Posts
Site Help			
 My Page What it is and how to use it	2	2	Mon Jun 28, 2004 8:45 pm Webmaster →

[Mark all forums read](#)

All times are GMT

Log in

Username:

Password:

Log me on automatically each visit

Log in



SITE SEARCH

Webmaster's Page

Welcome to my page! I have gathered together some links throughout the SPACE site that I think will be useful to others. You can also visit my main site csiss.org. The description for this page is provided in your forum Profile.

Teaching Materials

- » [CSISS - Course Syllabi for Anthropology](#)
- » [Internet Resources for a Geographic Education](#)
- » [Concept Maps](#)
- » [Demographic Data Viewer Home Page](#)

Discipline Resources

- » [Using GIS as an Economic Development Tool](#)
- » [Population Geography](#)

GIS Cookbook

- » [Define Projection for a Shapefile or Geodatabase](#)
- » [Background Information about Presentations and Finishing](#)
- » [Reprojecting Data](#)
- » [Making a Choropleth map](#)
- » [How to Open a New Project, New View, or Existing Project, then Add Data](#)

Challenges for *SPACE* Workshop Participants I

- **Establish, Articulate and Meet Personal Instructional Goals**
 - Develop operational background in spatial analytic concepts and tools
 - Make use of spatial concepts and tools in designing instructional plans (e.g., rubrics, syllabi, curricula)
 - Make use of CSISS and SPACE resources in workshop and in teaching
 - Become familiar with approaches to learning assessment and develop plans for implementation in undergraduate teaching
 - Develop support networks for sharing knowledge and resources
- **Develop a Workshop Project consistent with those goals and with the goals of the SPACE project**
 - Prepare a Project Presentation for the final day of the workshop
 - Participate in constructive critique of project presentations



Challenges for *SPACE* Workshop Participants II

- ***SPACE* Incentive Awards:**
 - Four \$1500 expense awards to participate in spatial-oriented conference or to present a conference paper about their experience in teaching spatial thinking at the undergraduate level.
 - Eligibility: *SPACE* workshop participants
 - Based on implementation of course exercises and syllabi, development of educational development resources, or superb example of a student course project
 - Details forthcoming



Challenges for *SPACE* Workshop Participants III

- **Academic Conference Courses to Enhance Spatial Science (ACCESS) Years 2 and 3**
 - **Half-day and full-day workshops at academic discipline conferences**
 - exposure and profile for spatial analysis in undergraduate teaching
 - Follow-up support for prior workshop participants
 - Involve spatial researchers from different disciplines
 - **Offers of assistance** appreciated (organizing, instructing, examples of application) – *SPACE* will provide financial assistance





AMERICAN ANTHROPOLOGICAL ASSOCIATION

101st Annual Meeting, New Orleans, 20-24 November 2002

Workshop on Spatial Analysis in Anthropology

21 November, 1:00 pm - 4:00 pm

Emilio Moran (Indiana University) *Introduction*

Eduardo Brondizio (Indiana University)

Enhancing Ethnographic Research through Spatial and Temporal Analysis

Luc Anselin (University of Illinois, Urbana-Champaign)

Mapping and Analysis for Spatial Social Science

Donald Janelle (UC Santa Barbara) *Resources for Spatial Thinking and Analysis*

Susan Stonich (UC Santa Barbara) *The Future of Spatial Approaches in Anthropology*



Organized by Barbara Herr-Harthorn (UC Santa Barbara)

Center for Spatially Integrated Social Science



Challenges for *SPACE* Workshop Participants IV

- **Documenting of Results of *SPACE* Workshops:**
 - **Entry and Exit Surveys** (expectations and evaluations)
 - Details on exit survey on Friday – completion requested within one week of workshop
 - **Follow-up Survey** (evidence of implementation and long-term influence) Spring 2005 for 2004 workshops
- **Recommending Web Links** to resources for spatial social science undergraduate education:
 - Course syllabi
 - Data and course exercises
 - Resources for curriculum, course, and project development, and evaluation
 - Instruments and resources for learning assessment

Challenges for *SPACE* Workshop Participants V

Enjoy the Workshop and the Santa Barbara Region!!!

Social Events

Reception

Hikes

Beach barbecue

Whale watching

Santa Ynez Valley wine tasting tour

Dinner at home of Mike and Fiona

