

## Diana Stuart Sinton

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### **Education**

- June 1996 Ph.D., Geography, Department of Geosciences, Oregon State University, Oregon.  
Dissertation: *Spatial and temporal patterns of windthrow in the Bull Run Watershed, Oregon*. Advisors: Julia A. Jones and Frederick J. Swanson
- June 1992 M.S., Geography, Department of Geosciences, Oregon State University, Oregon
- May 1988 B.A., *cum laude*, Religion, Middlebury College, Vermont

### **Professional Positions**

- December 2013 - Adjunct Associate Professor, Soil & Crop Science Section, School of Integrated Plant Sciences, College of Agricultural and Life Sciences, Cornell University, Ithaca, New York
- July 2013 - Executive Director, University Consortium for Geographic Information Science (UCGIS)
- March 2013 - Executive Editor and Creative Lead, TeachGIS.org
- July 2013 – June '17 Series Editor, SpatialLABS, Esri, Redlands, California
- April 2013 – Aug '15 Contributing Researcher, a *Watershed Based Approach to Food Security and Sustaining Biodiversity project*. Forest Stewardship Program, State and Private Forestry, Yap State Department of Resources and Development, Yap, Micronesia. Funded through the Institute of Pacific Islands Forestry, USDA Forest Service, Hilo, Hawaii. 2013-2015.
- Aug. '07 – July '13 Director of Spatial Curriculum and Research, University of Redlands. Redlands, California. Faculty rank of Associate Professor, 2009-2013; Assistant Professor, 2007-2009.
- Sept. '03 – Aug. '07 Chief Program Officer and GIS Program Director, National Institute for Technology and Liberal Education. Middlebury College, Middlebury, Vermont
- January – June '03 International Research Fellow, Agricultural Plant Physiology and Ecology Research Institute. College of Agronomy, University of Buenos Aires, Argentina.

- Aug. '97 – June '03 Assistant Professor of Environmental Studies and Geography, and Director, Environmental Studies Geographic Information Systems Laboratory. Division of Environmental Studies, Alfred University, Alfred, New York
- January - August '97 GIS Analyst, National Marine Fisheries Service. National Oceanic and Atmospheric Administration, Narragansett, Rhode Island
- January – June '97 Adjunct Assistant Professor. Department of Natural Resources Science. University of Rhode Island, Kingston, Rhode Island

### **Teaching Experience**

#### Cornell University (2013 - present)

- Geographic Information Systems, PLSCS 4200
- Spatial Modeling and Analysis, CSS/NTRS 6200 (with D. Rossiter)

#### University of Redlands (2007-2013)

- Foundations of Spatial Thinking, EDUC 616 (traditional and online)
- Fundamentals of Geographic Information Science, GIS 611 (co-taught with other MS GIS faculty)
- Spatial Analysis and GIS, EVST 110
- First Year Seminar, New Ways to Map a Changing World
- Understanding Spatial Data Uncertainty workshop, GIS 650
- Territorial Politics, GOVT 362 (with S. Wuhs)
- Mapping People, Mapping Places, SOAN 365 (with W. Bernardini)

#### Alfred University (1997-2003)

- Introduction to GIS, ENVS 220
- Advanced GIS Applications, ENVS 320
- Principles of Geography, ENVS 103
- Environmental History, ENVS 204
- Environmental Data Analysis, ENVS 205
- Environmental Research Procedures, ENVS 240/241
- Natural Resources Management, ENVS 415
- Research Planning, ENVS 440
- Senior Seminar, ENVS 490
- Senior Research Project, ENVS 499

#### University of Rhode Island (1997)

- Ecology of Fragmented Landscapes, NRS 534 (with P. August)

### **Honors & Achievements**

- 2016 Journal of Geography Award for Best Article, National Council for Geographic Education
- 2016 UCGIS Education Award
- 2013 Meid Mentor, Marymount College, Palos Verdes, California
- 2009 SPLINT (Spatial Literacy in Teaching) Fellow, Centres for Excellence in Teaching & Learning (University of Leicester, England)

- 2003 Ruth Berger Rubenstein Memorial Award for Excellence in Teaching, Alfred University  
 2002 International Research Fellowship, National Science Foundation  
 1996 Parenzin Research Award, Department of Geosciences, Oregon State University

### **Professional Honors & Service**

Advisory Boards *Exploring Links between STEM Success and Spatial Skills: Undergraduate GIS Courses and a Spatial Turn of Mind*. Nora Newcombe (PI), Temple University. NSF Grant #1660966, 2017-2020.

*Collaborative Research: Cognitive and Neural Indicators of School-based Improvement in Spatial Problem Solving*. Robert Kolvoord (PI), James Madison University. NSF Grant #1420600, 2015-2017.

Esri Education Advisory Board, May 2012 - June 2014

*GeoGames - a virtual simulation workbench for teaching and learning through a real-world spatial perspective*. Ola Ahlqvist (PI), The Ohio State University. NSF Grant #1124037, #1320259, 2011 – 2015.

Invited Memberships Geography Commission of the United States National Section of the Pan American Institute of Geography and History, Organization of American States. June 2012 – present.

*European Spatial Citizenship Project (SPACIT)*. Comenius Multilateral Project, European Commission, on behalf of the National Council of Geographic Education, 2012 – 2014.

Geography Education Research Committee (GERC), *Establishing a Roadmap for Large-Scale Improvement of K-12 Education in the Geographical Sciences*. DRL – DR-K12 Resources and Tools, NSF Award #1049437, 2010-2012.

Elected Memberships Research Committee, National Council for Geographic Education, 2009-2011.

External Evaluator *A New Collaborative Model for Geospatial Technology Education and Workforce Studies in a Rural Region*. Tora Johnson (PI), University of Maine, Machias. NSF Grant #0802417, 2008-2011.

Editorial Boards Journal of Geography in Higher Education (2012 – present)  
 Spatial Humanities Step-by-Step, Univ. of Virginia, <http://spatial.scholarslab.org> (

Confs. Organized Cornell University Geospatial Forum (CUGEO), Ithaca, NY, October 2014; October 2015  
 Spatial Thinking across the College Curriculum, Santa Barbara, CA, December 2012  
 Mapping People Symposium, Redlands, CA, October 2012  
 LENS Institute: Mapping Communities, University of Redlands, June 2012  
 LENS Institute: Mapping Migrations, University of Redlands, June 2011  
 LENS Institute: Mapping People, University of Redlands, June 2010  
 Geodesign Summit, Esri, Redlands, CA, January 2010, January 2011

- Conf. Ssns. Organized Emerging Ideas in GIS Instruction. Association of American Geographers, Seattle, WA, 2010.  
Diverse Approaches and Strategies for Spatial Thinking. Association of American Geographers, Washington DC, 2010.  
Teaching and Learning GIS: Issues of Spatial Thinking, Educational Frameworks, and Student Needs and Abilities. Association of American Geographers, Las Vegas, NV, 2009.
- Journal Reviewer *Journal of Geography in Higher Education; Journal of Geography; Transactions in GIS; International Journal of Geomatics and Spatial Analysis; The Professional Geographer; Landscape Ecology*
- Outreach Talks SpatialLABS as Component of Servant Leadership. Plenary, Esri GIS Educational Conference, San Diego, California, July 2015.  
Open Educational Resources Presentation. Plenary, Esri GIS Educational Conference, San Diego, California, July 2012.  
Over 40 presentations to the general public and educational communities about spatial thinking, GIS, and its applications, 1998 – present

### **Professional Volunteer Activities**

- 2011 – 2013 Co-Coordinator, Analysis Team, Standby Task Force, Crisis Mapping. Libya Deployment, 2011. Ongoing contributor and member. <http://members.standbytaskforce.com/>
- 2006 GIS Corps, Medical Mission Exchange deployment

### **Grants**

- 2015 *Communicating Uncertainty via Scientific Illustrations*, Visionary Grant from the Gordon Research Conferences, \$3,450. Together with J. Christiansen (Scientific American).
- 2011 *Visualizing Flow and Movement in the Humanities*, National Endowment for the Humanities, \$24,956.
- 2009 *Learning Spatially (LENS): Infusing Spatial Thinking into Undergraduate Education*, W. M. Keck Foundation, \$250,000.
- 2008 *Increased Effectiveness of Field-Based Courses Through Portable Technology*. Technology for Teaching Grant. Hewlett-Packard. Submitted with W. McIntyre and C. Sinton, University of Redlands. \$20,000.
- 2002 *Understanding the invasion of exotic woody species and native shrubs into a protected area: a case study of El Palmar National Park, Argentina*. International Research Fellowship, National Science Foundation, \$75,000.
- 2001 Establishment of an Undergraduate Research Fund. Donaldson Foundation, \$25,000. Submitted with M. Hluchy, Alfred University.
- 2001 Steps to Integrate GIS into the County Government. Allegany County Board of Legislators, Allegany County, New York, \$14,500 (funding to support three students for summer work).

- 2000 Geographic Information Systems Curriculum for Grades 7-12. Office of Curriculum, Instruction and Assessment, Department of Education, New York State, \$34,763. Submitted with G. Niles, Alfred University.
- 2000 Integrating Spatial Analyses into an Environmental Studies Curriculum. National Science Foundation, Division of Undergraduate Education: Course, Curriculum and Laboratory Improvement Program, \$57,794. Submitted with M. Hluchy and G. Godshalk, Alfred University.
- 2000 Enriching the Geospatial Technology Resources Available for Students in Alfred, New York. Geographic Information Systems / Spatial Information Group, Rochester, New York, \$500. Submitted with A. McLaughlin, SUNY Alfred.
- 1999 Using a Geographic Information System to Identify Sites for Future Oil Production. New York State Energy Research and Development Association. \$70,000. Submitted with M. Hluchy and A. Van Tyne, Alfred University.
- 1999 Equipment for research in an Environmental Studies Program. Seth Sprague Educational and Charitable Trust, \$13,500. Submitted with M. Hluchy and G. Godshalk, Alfred University.
- 1999 Analysis of vegetation data with GIS. USDA Forest Service, Finger Lakes National Forest, \$2,000 (funds to support student summer work).
- 1999 Visiting Geographical Scientist Program. Association of American Geographers, \$500.

### **Publications**

(\* = undergraduate student, # = graduate student)

#### **Journal Papers**

**Sinton, D. S.** (2016). Spatial Thinking and GIS. In H. Burte, T. Kauppinen, & M. Hegarty (Eds.), *Proceedings of the Workshop on Teaching Spatial Thinking from Interdisciplinary Perspectives (TSTIP 2015) at COSIT 2015 in Santa Fe, NM*. CEUR-WS.org, online: [ceur-ws.org/Vol-1557/](http://ceur-ws.org/Vol-1557/).

Baker, T.R.; Battersby, S.; Bednarz, S.W.; Bodzin, A.; Kolvoord B., Moore, S., **Sinton, D.** & Uttal, D. (2015). A Research Agenda for Geospatial Technologies and Learning, *Journal of Geography*, 114:3, 118-130, DOI: 10.1080/00221341.2014.950684. Winner of the 2016 Journal of Geography Award from the National Council for Geographic Information.

King#, A. M., Larsen, L. I. and **Sinton, D. S.** (2012). The Spatially Interactive Literature System Study Tool: A GIS Classroom Tool for Interpreting History. *International Journal of Applied Geospatial Research*, 3(3): 70-85.

Howarth, J. T. and **Sinton, D. S.** (2011). Sequencing spatial concepts in problem based GIS instruction. International Conference: Spatial Thinking and Geographic Information Science. *Procedia – Social and Behavioral Sciences* 21:253-259.

**Sinton, D. S.** (2009). Roles for GIS within Higher Education. *Journal of Geography in Higher Education* Vol. 33(1):S7-S16.

**Sinton, D. S.** and Huber, W. (2007). Mapping polka and its ethnic heritage in the United States. *Journal of Geography* Vol. 106: 41-47.

**Sinton, D. S.** and Jones, J.A. (2002). Extreme winds and windthrow in the western Columbia River Gorge. *Northwest Science* Vol. 76(2): 173-182.

**Sinton, D. S.**, Jones, J. A., Swanson, F. J., and Ohmann, J. (2000). Forest composition, structure, and disturbance by wind in the Bull Run basin, Oregon. *Ecology* Vol. 81(9): 2539-2556.

**Books Sinton, D. S.**, Kolvoord, B., Gersmehl, P., Bednarz, S. and Uttal, D. (2013). *The People's Guide to Spatial Thinking*. Washington, DC: National Council for Geographic Education.

**Sinton, D. S.** and Lund, J. J. (Eds.) (2006). *Understanding Place: GIS and Mapping across the Curriculum*. Redlands, CA: ESRI Press.

### Book Chapters

**Sinton, D. S.** Mapping, in R. Davis, Gold, K. Harris, and J. Sayers (Eds), *Digital Pedagogy in the Humanities: Concepts, Models, and Experiments*. Modern Language Association. Forthcoming 2017.

**Sinton, D. S.** (2016). Critical Spatial Thinking, in D. Richardson, N. Castree, M. Goodchild, W. Liu, A. Kobayashi, & R. Marston (Eds.) *The International Encyclopedia of Geography: People, the Earth, Environment, and Technology*. Hoboken, NJ: Wiley/AAG: **pages?**

**Sinton, D. S.** (2014), Spatial Learning in Higher Education, in D. R. Montello, K. Grossner, K., & D. G. Janelle (Eds.), *Space in mind: Concepts for spatial learning and education*. Cambridge, MA: MIT Press: 219-238.

**Sinton, D. S.** (2012). Making the case for GIS in higher education, p. 17-36 in Unwin, D., N. Tate, K. Foote and D. DiBiase (eds.), in *Teaching Geographic Information Science and Technology in Higher Education*. London: John Wiley & Sons (UK).

**Sinton, D. S.** (2011). Spatial Thinking, in Stoltman, J. (ed.), *21<sup>st</sup> Century Geography: A Reference Handbook*. Thousand Oaks, CA: SAGE Publications: 734-744.

**Sinton, D. S.** and Schultz, R. (2008). GIS and Mapping Applications for Reasoning and Critical Thinking about the Environment and Society, in M. N. Solem and K. E. Foote (eds.), *Teaching College Geography: A Practical Guide for Graduate Students and Early Career Faculty*. Upper Saddle River, NJ: Prentice-Hall: 69-80.

Lund, J. J. and **Sinton, D. S.** (2006). Critical and creative visual thinking, in D. Sinton and J. Lund (eds.), *Understanding Place: GIS and Mapping Across the Curriculum*. Redlands, CA: ESRI Press: 1-18.

**Sinton, D. S.** and Bednarz, S. W. (2006). About that G in GIS, in Sinton, D. and J. Lund (eds.), *Understanding Place: GIS and Mapping across the Curriculum*. Redlands, CA: ESRI Press: 19-34.

**Editorial Production** Steinitz, C. (2012). *A Framework for Geodesign: Changing Geography by Design*. Redlands, CA: Esri Press.

**Other Publications  
(non-refereed)**

**Sinton, D. S.** Regular writer for articles at *Directions Magazine*. Collection available at <http://www.directionsmag.com/authors/diana-s.-sinton/432667>. February 2015 – present.

**Sinton, D. S.** (2011). A Spatial Literacy Initiative in Higher Education. *ArcNews* 32(4): 36-37. <http://www.esri.com/news/arcnews/winter1011articles/a-spatial-literacy.html>

**Sinton, D. S.** (Ed.). (2006). Managing and Supporting GIS in Higher Educational Contexts. *Transformations*, an online series of occasional papers exploring the intersection of digital technologies and the liberal arts. National Institute for Technology and Liberal Education (NITLE). May Issue.

**Sinton, D. S.** (2000). GIS at work in Western New York. *Geographic Information Systems Technology News* Vol. 2(2): 3.

**Sinton, D. S.** (2000). Putting Alfred on the map. *GIS Quarterly*, Southern Tier West Regional Planning and Development Board. Vol. 4(2): 4-5.

Patterson, R. W.\*, Alsheimer, A.\*, Booker, J. F. and **Sinton, D. S.** (1999). Estimating tourism impacts of deer hunting in New York State: a case study of 1997 deer take data. Proceedings of the 1999 Northeastern Recreation Research Symposium, General Technical Report, Northeastern Forest Experiment Station, U. S. Department of Agriculture, April.

Jones, J. A., Swanson, F. J. and **Sinton, D. S.** (1998). A history of windthrow, wildfire, and forest cutting in the Bull Run watershed, Oregon. Report to the City of Portland Water Bureau and the Mt. Hood National Forest, Cooperative Agreement No. PNW 92-0220.

Damon, C., Nicholson, M., **Sinton, D.**, August, P., and Labash, C. (1997). Spatial variation in marine ecosystems: Visualization of patterns and trends. Final report (NOAA-CMER 96-22) to the National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Narragansett, Rhode Island.

**Sinton, D. S.** (1996). Using GIS to map *Calanus finmarchicus* and temperature data from twenty-five MARMAP cruises, 1977-1987. A report to the National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Narragansett, Rhode Island.

**Invited Talks & Conference Presentations**

**Invited Talks**

- 2015 Spatial Reasoning and STEM Learning. Department of Geography Seminar, Texas A&M University, College Station, Texas. October.
- 2015 Spatial Thinking via Geography and GIScience. Pre-conference workshop on Teaching Spatial Thinking through Multiple Perspectives at COSIT XII, Santa Fe, New Mexico. October.
- 2015 Learning through Geospatial Analytics. Geospatial Forum, Center for Geospatial Analytics, North Carolina State University, Raleigh, North Carolina. September.
- 2015 Why Spatial Thinking Underlies Visual Thinking. Plenary Presentation, Visualization in Science and Education, Gordon Research Conference, Bates College, Lewiston, Maine. August.
- 2014 Building the next Generation of Knowledge about Geospatial Technologies and Learning. Keynote Presentation, GI-Forum, University of Salzburg, Salzburg, Austria. July.
- 2014 New Ways to Map and Be Mapped. Wesleyan University, Middletown, Connecticut. April.
- 2013 Maps and Spatial Perspectives. Mapping Worlds Workshop, University of Vermont, Burlington, Vermont. August.
- 2013 Geospatial Thinking to Reason and Communicate. Meid Visiting Mentor Program, Marymount College, Palos Verdes, California. March.
- 2012 Geography and GIS Education in Higher Education. GIS and Spatial Thinking in Higher Education, Bucknell University, Lewisburg, Pennsylvania. November.
- 2012 A Few Things to Know about Geography and GIS Education in Higher Education. New York State Geospatial Summit, Skaneateles, New York. October.
- 2012 Digital Maps in Scholarship and Publishing. Digital Humanities Initiative, Hamilton College, Clinton, New York. February.
- 2011 Enhancing Learning and Scholarship with Mapping Technologies. Center for New Designs in Learning and Scholarship, Georgetown University, Washington, DC. November.



- 2011 Maps, Metaphors, Analogies and the Next Generation of GIS & Humanities Questions. Mapping Place: GIS and Humanities Conference. Interdisciplinary Humanities Center, UC Santa Barbara, Santa Barbara, California. February.
- 2009 Support for Spatial Thinking in the Humanities Curriculum. Keynote Presentation, Institute for Enabling Geospatial Scholarship, University of Virginia, Charlottesville, Virginia. November.
- 2009 Spatial Thinking in the Humanities. Scholarly Communications Institute, University of Virginia, Charlottesville, Virginia. June.
- 2009 How can we reap the greatest educational benefits from GIS? Plenary Presentation, National Summit on GIS in K-12 Education. James Madison University, Harrisonburg, Virginia. June.
- 2009 The Power of Geographical Perspectives. Scholar's Lab, Digital Research and Scholarship Department, University of Virginia Libraries, University of Virginia. Charlottesville, Virginia. February.
- 2008 A College Class in Spatial Thinking. Specialists' Meeting in GIS and Design, Santa Barbara, California. December.
- 2007 One Approach to Bringing Spatial Thinking to Higher Education. UCSB Brown Bag Forum on Spatial Thinking, UC Santa Barbara, Santa Barbara, California. December.
- 2006 SPLINT, SPACE, NITLE, and ARCNRSISS: a Panel on Integrating Spatial Analysis in University Teaching and Research. Association of American Geographers Annual Conference, Chicago, Illinois. March.
- 2005 Change Detection: Interpreting Patterns of Woody Vegetation in El Palmar National Park, Argentina. Department of Geography, Middlebury College, Middlebury, Vermont. April.
- 2005 Change Detection: Interpreting Patterns of Woody Vegetation in El Palmar National Park, Argentina. Department of Geography, University of Vermont, Burlington, Vermont. March.
- 2002 Using GIS to Find New Oil in Old Wells. Annual Meeting of the New York State Oil Producers Association, Cuba, New York. October.
- 2001 The Influence of Agriculture and Geography on Forest Patterns in Allegany County, New York, or Historical Ecology. Division of Biology, Alfred University, Alfred, New York. April.
- 2000 Spatial and Temporal Patterns of Forest Disturbances in Oregon. Department of Geography, SUNY Buffalo, Buffalo, New York. March.

- 1999 GIS and Municipal Watershed Management. Department of Geography, SUNY Geneseo, Geneseo, New York. March.
- 1995 Pattern analysis of a forest disturbance using GIS and spatial statistics. Harvard Forest. Petersham, Massachusetts. July.
- 1995 Changes in the effect of wind on the landscape in the Pacific Northwest over the past century. American Association for the Advancement of Science, Pacific Regional Meeting. Vancouver, British Columbia, Canada. June.

**Conference Presentations  
(refereed)**

- 2013 Students Becoming Spatially Informed Citizens? National Council for Geographic Education, Denver, Colorado. August.
- 2012 Education for Spatial Citizenship. National Council for Geographic Education, San Marcos, Texas. October.
- 2012 Building a Spatial Literacy Program in Teacher Education. International Geographical Congress, Cologne, Germany. August.
- 2012 On-line Geospatial Learning: Insights Gained and Lessons Learned. Esri GIS Educational Conference, San Diego, California. July. Together with K. Lukens.
- 2012 Mapping People Visual Library Catalog. University Consortium for Geographic Information Science, Washington, DC. May.
- 2010 Activities to Promote and Develop Spatial Literacy. National Council for Geographic Education Annual Conference, Savannah, Georgia. October.
- 2009 Teaching Spatial Thinking and its Implications for Teaching GIS. ESRI's Education User's Conference. San Diego, California. July.
- 2008 Spatial Reasoning and Geographic Thought at the University of Redlands. ESRI's Education User's Conference. San Diego, California. July.
- 2008 Integration of Engineering and Science with the Liberal Arts: Learning from Each Other. Association of American Colleges and Universities Annual Meeting. Washington D.C. January.
- 2007 Active Learning in Liberal Education with Geographic Information Systems (GIS) Technologies. American Association of Colleges & Universities (AAC&U) Annual Conference. New Orleans, Louisiana. January. Together with M. Baber.
- 2005 Approaches for Integrating GIS on College Campuses. Northeast Regional Computing Program (NERCOMP). Worcester, Massachusetts. April.

- 2004 Teaching and Learning with GIS in the Liberal Arts. National Council for Geographic Education, Annual Meeting. Kansas City, Missouri. October.
- 2002 Exploring wind resources in Allegany County, New York. 18th Annual New York State GIS Conference. Liverpool, New York. October. Together with C. DeMay\*
- 2001 The Influence of Settlement Patterns, Agriculture and Geography on Forest Patterns in Allegany County, New York. American Society for Environmental History Annual Conference. Durham, North Carolina. April. Together with G. Clarke\*
- 1999 Geographic Information Systems and Emergency Services Planning. National Conference on Undergraduate Research. Rochester, New York. Together with R. Patterson\*
- 1998 Engaging Business and Environmental Studies Students in the Preparation of a Resource Management Plan. Northeastern Recreation Research Symposium, Bolton Landing, New York. October. Together with J. Booker, R. W. Patterson\*, and Z. B. Grice\*.
- 1998 Crossing traditional academic disciplines in preparation of a natural resource management plan. Annual Meeting of the Geological Society of America, Toronto, Canada. Abstract with Program, 30(7) A-210. Together with J. Booker.
- 1994 Patterns of windthrow in the Bull Run Watershed. International Association for Landscape Ecology, 9th Annual Conference. Tucson, Arizona. April.
- 1993 Reconstructing the windthrow patterns in the Bull Run Watershed, Mt. Hood National Forest, Oregon, USA. Wind and Wind-Related Tree Damage Conference, International Union of Forestry Research Organizations, Subject Group S.1.03. Edinburgh, Scotland, June.

**Conference Presentations  
(non-refereed)**

- 2017 Addressing Uncertainty through GIS Curricula. Annual Conference of the American Association of Geographers, Boston, Massachusetts. April. Together with Suzanne Wechsler.
- 2017 Learning and Applying Tools in Geography: Important Concepts in GIS. Association of Geographers, Boston, Massachusetts. April.
- 2015 Scale & Context Differences for Geospatial and Spatial Thinking. AGILE Conference, Lisbon, Portugal. July.
- 2013 Teaching Spatial Thinking. Annual Conference of the Association of American Geographers, Los Angeles, California. April.
- 2011 Setting the Stage for GIS Learning. Annual Conference of the Association of American Geographers, Seattle, Washington. April.

- 2010 Diverse Approaches and Strategies for Spatial Thinking. Annual Conference of the Association of American Geographers, Washington, D.C., April.
- 2009 An Introductory College Class in Spatial Thinking. Annual Conference of the Spatial Intelligence and Learning Center. Evanston, Illinois. May.
- 2009 LENS: Learning Spatially at the University of Redlands. Mapping for Sustainability, an online conference sponsored by the National Institute for Technology & Liberal Education (NITLE), April.
- 2009 A College Class in Spatial Thinking. Annual Conference of the Association of American Geographers. Las Vegas, Nevada. March.
- 2006 Linking GIS with Higher Education Objectives and Missions. Association of American Geographers National Meeting. Chicago, Illinois. March.
- 2005 A Place for GIS in the Liberal Arts. Association of American Geographers National Meeting. Denver, Colorado. April.
- 2004 GIS in the social sciences: tools for undergraduate courses in anthropology. Association of American Geographers National Meeting. Philadelphia, Pennsylvania. March. Together with R. Myers.
- 2002 The Geography of FM Radio in the United States. Association of American Geographers National Meeting. Los Angeles, California. March.
- 2000 Using geographic information systems to identify sites for oil recovery. American Association of Petroleum Geologists Eastern Sectional Meeting. London, Ontario, Canada, March. Together with M. Hluchy and A. Van Tyne.
- 2000 Economic Impacts of Deer Hunting in New York State. Association of American Geographers National Meeting. Pittsburgh, Pennsylvania. March 2000. Together with R. Patterson\* and J. Booker.
- 1997 Teaching GIS in an Undergraduate Curriculum. Mid-States Regional Conference, Association of American Geographers. Buffalo State College, Buffalo, New York. October.

### **Workshops Designed, Organized and Taught**

- Univ. of Redlands** *Visualizing Flow & Movement in the Humanities*. Two days. October 2012.  
*Short Spring Spatial Workshops*. Three days. April 2010; April 2011; May 2012.  
*Spatial Statistics*. Two days. May 2011. Organized with Esri.  
*Mini-Mapping workshops*. One hour.
- Introduction to Spatial Learning
    - September 2009; September 2008; October 2007
  - Virtual Globes: Basics and Advanced

- October 2009; March 2009; January 2009; February 2008; January 2008
- Map Mashups
  - April 2009; November 2008; December 2007
- Working with Census Data
  - October 2008; April 2008; November 2007
- Web Mapping Applications
  - October 2009; April 2008
- Basics of GIS with ArcMap
  - November 2009 (with D. Smith); February 2009

**NITLE** *Spatial Statistics*. Five days. Designed and co-taught with D. Unwin and B. Huber. Wheaton College, Norton, Massachusetts. May 2007.

*iGIS, Introducing GIS*. Three days. Lawrence University, Appleton, WI, December 2005; Willamette University, Salem, OR, January 2006; Austin College, Sherman, TX, January 2006; Birmingham-Southern College, Birmingham, AL, May 2006; Pomona College, Claremont, CA, June 2006. Beloit College, Beloit, WI, December 2006; Lewis & Clark College, Portland, OR, January 2007.

*Web-Mapping: Exploring Internet-Based Applications as Teaching and Learning Tools*. Four days. Pomona College, Claremont, CA, June 2006.

*Managing and Supporting GIS*. Three days. Trinity University, San Antonio, TX, March 2006.

*Teaching and Learning with GIS*. Five days. Middlebury College, Middlebury, VT, June 2004; June 2005.

*GIS Across the Curriculum*. Five days. Middlebury College, Middlebury, VT, June 2004, June 2005; College of Wooster, Wooster, OH, January 2004; Furman University, Greenville, SC, January 2005; University of Puget Sound, Tacoma, WA, July 2005.

*GIS for Urban Studies*. Three days. Trinity College, Hartford, CT, June 2005.

*GIS for Landscape Ecology*. Four days. University of the South, Sewanee, TN, May 2005.

*Student-Immersion, Faculty-Focus*. Twelve days. Middlebury College, VT, June 2005.

*Teaching with GIS in the Liberal Arts*. Seven days. Colorado College, Colorado Springs, CO, August 2004.

**Others** *Intro to Mapping and GIS for the Citrus Valley High School*, Redlands Unified School District, Redlands, CA. Three days. Designed and co-taught with D. Smith and C. Fitzpatrick, May 2009.

*EDGE Workshop: GIS and Mapping Technologies: Applications for Reasoning and Critical Thinking.* Three hours. Association of American Geographers Conference, Las Vegas, NV. Designed and co-taught with R. Schultz. March 2009.

*GIS and Critical Thinking.* One day. National Geospatial Intelligence Agency, Fort Belvoir, VA. Designed and co-taught with M. Goodchild. July 2008.

*Geographic Information Systems Technology for Grades 7-12.* Two day workshop for fifteen middle-school teachers. Alfred University, Alfred, NY, March 2001.