

Professional Experience

- 1994 - **Lecturer Landscape Architecture, Urban Planning and Design**,
Harvard University Graduate School of Design
- 1993 - **Geographic Information Systems Specialist**, Harvard University
Graduate School of Design
- 1989 - 1991 **Cartographic Supervisor**, HM Gousha Company, Comfort Texas
- 1985 - 1989 **Cartographic Technician**, Rand McNally / Continental Map, Austin Texas
- 1984 -1985 **Land Survey Instrument Man**, Accutex Survey Systems, Austin Texas

Education:

- 1993 **Master of City Planning, Massachusetts Institute of Technology**,
Thesis title: Applications of Geographic Information Systems to School Planning
- 1984 **Bachelor of Arts, Indiana University**, (Geography)

Teaching

Courses Designed and Taught Independently:

- 1997 - 2009 **Theory and Applications of Geographic Information Systems**, a full-semester course provides students with the technical skills to design, document and to evaluate analytical studies of places and to compile and share spatial data in a scholarly manner.
- 2003 - 2009 **Site Systems Representation II**, a half-semester course in three-dimensional representation provides the basic techniques of terrain modeling, representation of built-form, shadow studies and view studies Integrated with Fourth Semester Landscape Architecture Studio.
- 2005 - 2007 **Three Dimensional Modeling of Cities**, considers new ways of understanding urban form through metropolitan-scale databases of urban models made possible by new combinations of technologies such as LIDAR , encapsulated three-dimensional models in enterprise-scale relational databases.
- 2002 – 2009 **Site systems Representation**, a half-semester course in cartographic modeling is required for Master of Landscape Architecture students. This course is integrated with two other courses taken concurrently: the third-semester core landscape planning studio and Theory and Methods of Landscape Planning, taught by Professor Carl Steinitz. Taught in collaboration with Professor Hope Hasbrouck 2000 – 2002.

Teaching Collaborations:

- 2005 - 2006 **Techniques of Physical Planning**: coordinated with the first semester urban planning studio. My role is to develop and present tutorial modules on basic graphic production tools, Geographic Information Systems, and three-dimensional representation and analysis techniques. This course and studio were coordinated by Professor Judith Grant Long.
- 1994 - 2004 **Summer Master of Urban Planning Techniques Course**, a three-week boot-camp intended to teach basic representation skills to incoming master

of Urban Planning Students. This course was coordinated by and taught in collaboration with other urban design faculty.

- 2003** **Real Infrastructure for Virtual Cities**, a research seminar exploring the integration of Computer Aided Design tools with enterprise-scale database database management systems. With Stephen Ervin.

Book Chapters

- 2008** **Lapierre, A and P. Cote**, “Using Open Web Services for urban data management: A testbed resulting from an OGC initiative for offering standard CAD/GIS/BIM services” in **Geospatial information technology for emergency response** (ISPRS book series). Taylor & Francis Group, London, UK

Research Reports, Presentations and Invited Lectures

- 2009** **City Models of the Future and the Past**, Geoweb Conference, Vancouver British Columbia.
- 2009** **Where Are Sampson and Goliath? 3D Experiments with the Belfast Skyline**, Geo World Magazine May Issue.
- 2009** **Working toward the Future of Integrated City Models: Toward Administrative Modularization**, 3D Summit, Open Geospatial Consortium Technical Committee Meeting, Cambridge Massachusetts
- 2009** **New Media and Community Planning**, Harvard University Symposium on New Media and Community Planning
- 2008** **An Urban Design Laboratory for Belfast, Northern Ireland**, University of Ulster Department School of Architecture and Design
- 2008** **Promoting a Culture of Information Stewardship at the Harvard Design School**, 2nd Annual Symposium on Spatial Analysis, Harvard Center for Geographic Analysis.
- 2008** **A Data Model for Representing Cities in Three Dimensions**, ESRI User Conference, San Diego California
- 2008** **Integrating Building Information Models with Geospatial Information Infrastructure**, Joint Services Environmental Management Conference, Columbus Ohio
- 2007** **The Road Ahead for Metropolitan-Scale Three Dimensional Models**, Presented at the National Conference of the Urban and Regional Information Systems Association,
- 2007** **Geographic Information Systems and BIM: Interoperability for Modeling Cities**, Presented at the National Conference of the Association of American Architects
- 2007** **Web Services Architecture for CAD GIS and BIM**. Open Geospatial Consortium Interoperability Program Report, Official OGC Discussion Paper 07_r23_02.
- 2006** **Two Perspectives on Evolution of 3d City Models: Pragmatic and Principled**, Invited lecture Bonn University Department of Geodesy and Geoinformatics.
- 2006** **Understanding Threatened Urban View Corridors with LIDAR Data**, Presented at the 2006 ESRI International User Conference

- 2005** **Rendering Multiple Urban Design Scenarios from a Single Database of 3D Features**, Proceedings of the Ninth International Conference on Computers in Urban Planning.
- 2004** **Three-Tiered Approach to Supporting Geographic Information Systems at the Harvard Design School**, Proceedings of the 24th Annual Conference of the Environmental Systems Research Institute.
- 2003** **Data Models for Three-Dimensional Cities**, presented to the Massachusetts Geographic Information Council.
- 2002** **Real Infrastructure for Virtual Cities**, Proceedings of the 22nd Annual Conference of the Environmental Systems Research Institute.
- 1999** **MCP: A Metadata Collection Parser for Geospatial Metadata**, delivered at the 19th Annual Conference of the Environmental Systems Research Institute.
- 1996** **Alternative Futures for Camp Pendleton, California**, GIS Research Carl Steinitz et al, Harvard GSD Press.
- 1996** **Strategy for Managing Geographic Analysis and Cartography In a Major Ecological Research Project**, delivered at the 16th Annual Conference of the Environmental Systems Research Institute.
- 1995** **Improved Method for Selection of Shade symbols for use with Synthetic Relief**, poster presentation, 15th Annual Conference of the Environmental Systems Research Institute, July.
- 1992** **Fighting Urban Traffic Congestion with Exploratory Data Analysis**, published in ArcInfo Map Book Volume 5, ESRI Press.

Grants and Funded Research:

- 2006** **Design of 3d Modeling Infrastructure for Town of Brookline Massachusetts.** Funded by Town of Brookline GIS Department
- 2005** **Lenovo Tablet Computer.** Awarded by the Harvard University Provosts Office
- 2004** **Cross-Curricular Modules for Teaching Site Representation at the Harvard Design School,** Funded by Harvard University Provost's Office.
- 2003** **Tools for Discovering the Topology of Segregation,** with Guy Stuart of the Kennedy School of Government.
- 2002** **Feasibility Study for a Commonwealth-wide Inventory of Underutilized or Contaminated Sites,** Funded by Massachusetts Governor's Office for Brownfield Revitalization.
- 2000** **Investigation of Technologies for Maintaining Large Three Dimensional Models of Cities,** Funded by the Boston Redevelopment Authority, 2000.

Activities

Harvard Graduate School of Design Manual of Geographic Information Systems: Initiated, developed and maintain a compendium of multipurpose tutorials with on-line datasets for teaching and self-guided learning in techniques of Spatial Data Handling, Analytical Techniques and Three-Dimensional Modeling. This manual currently consists

of 58 individual tutorial documents. Published at www.gsd.harvard.edu/gis/manual. This resource is currently the #1 Hit when search "GIS Manual" in Google!

Archive of Spatial Data for Design: Initiated, developed and maintain a data collection for use by GSD students. This collection serves as an on-line archive of geographic datasets that have been collected for various studios and research projects. It now comprises detailed GIS databases for over 50 cities, including three-dimensional models of the entire Boston and New York City Metropolitan Areas, maintained in an enterprise-scale database server.

University-Wide Site License Coordinator for Spatial Analysis Software: Initiated, developed and maintain the administrative framework that allows any Harvard affiliate student, faculty or staff to simply download and use software tools licensed by ESRI, Leica Geosystems, and Safe Software (FME.) 1995-2006

Doctoral Thesis Committee Member: I have served on four doctoral thesis committees.

Service, Volunteer Work and Awards:

- 2009-** **Voted Best Teacher** by Students in the Department of Urban Planning and Design, Harvard University Graduate School of Design
- 2008-** **Board of Review;** Norman B. Leventhal Map Center at the Boston Public Library
- 2007 - 2009** **Community Advisory Committee Member,** Massachusetts Executive Office of Transportation Greenline Extension Impact Study
- 2006-** **Thread Architect,** Open Geospatial Consortium initiative to develop Open Web Services for CAD, GIS and Building Information Models.
- 2005 -** **Technical Steering Committee,** Harvard Center for Geographic Analysis
- 2000 -** **Steering Committee,** Harvard Geospatial Library
- 2000 -** **Jury Member,** Fisher Prize for Geographic Information Science
- 2001 - 2002** **Vice President,** East Cambridge Planning Team
- 2002 - 2003** **Executive Board Member,** East Cambridge Planning Team
- 1999 - 2001** **Advisory Board Member,** Boston Children and Families Database