

Terence R. Smith  
Professor IX

June 30th, 2008

Last update filed on June 30, 2003

This update refers to the period July 1, 2003 to June 30, 2008.

## **CURRICULUM VITAE**

### **EDUCATION**

1965 BA, Geography (First Class Honours), Cambridge University, England.

1971 Ph.D. Environmental Engineering and Geography, Johns Hopkins, Baltimore.

1975-1976 Doctoral Program in Applied Economics, GSM, University of Rochester, NY.

### **AREAS OF SPECIALIZATION**

scientific database and computational modelling systems;

digital libraries;

spatial database systems;

applications of knowledge-based techniques in spatial problem solving;

theory of fluvial landscape systems.

### **PROFESSIONAL EXPERIENCE**

1983-present Professor of Geography, University of California, Santa Barbara

1984-present Professor of Computer Science, University of California, Santa Barbara

1991-92 Visiting Professor of Computer Science, Brown University, Providence, Rhode Island

1986-90 Chairman, Department of Computer Science, University of California, Santa Barbara

1979-1983 Associate Professor of Geography, University of California, Santa Barbara

1980-1981 Visiting Associate Professor, Department of Psychology, Carnegie-Mellon University.

1980-1981 Visiting Associate Professor of Geography, McMaster University, Hamilton, Ontario, Canada

1976-1979 Assistant Professor of Geography, University of California, Santa Barbara

1976 Economist, Federal Reserve Bank of New York

1973-1976 Research Fellow, Department of Physics, University of Rochester.

1973-1975 Visiting Assistant Professor of Geology, University of Rochester.

1971-1974 Assistant Professor of Geography, University of Western Ontario, London, Ontario, Canada

## PART I: RESEARCH

### Cumulative List of Publications

#	YEAR	TITLE and AUTHORS	PUBLISHER	CATEGORY
1	1972	Stability and the Conservation of Mass in Drainage-Basin Evolution (with F.P. Bretherton)	<i>Water Resources Research</i> , 8, 1506-1529.	Article
2	1974	A Derivation of the Hydraulic Geometry of Steady-State Channels from Conservation Principles and Sediment Transport Laws	<i>Journal of Geology</i> , 82, 98-104	Article
3	1976	Set-Determined Process and the Growth of Spatial Structure	<i>Geographical Analysis</i> , 8, 354-375.	Article
4	1977	Watershed Geochemistry: The Control of Aqueous Solutions by Soil Materials in a Small Watershed (with T. Dunne)	<i>Earth Surface Processes</i> , 2, 421-425.	Article
5	1977	Continuous and Discontinuous Response to Smoothly-Decreasing Effective Distance: An Analysis with Special Reference to Overbanking in the 1920's	<i>Environment and Planning A</i> , 9, 461-475.	Article
6	1977	The 'Internal Referencing' Structural Instability in an Environment Characterized by Random Variation: The Example of the N.Y.C. Banks in the Crisis of 1857	<i>in Statistical Mechanics and Statistical Methods in Theory and Applications</i> , U. Landman, Ed. New York: Plenum Press, 685-721.	Refereed chapter
7	1978	Uncertainty, Diversification and Mental Maps in Spatial-Choice Problems	<i>Geographical Analysis</i> , 10, 120-141.	Article

#	YEAR	TITLE and AUTHORS	PUBLISHER	CATEGORY
8	1978	Transitivity, Spatially-Separable Functions and United States Migration Streams (with C. Clayton)	<i>Environment and Planning A</i> , 10, 399-414.	Article
9	1978	The Determinants of Manpower Costs in the Examination of Banks in the Second Federal Reserve District (with J. Martin)	<i>Journal of Bank Research</i> , Autumn, 161-167.	Article
10	1978	Optimizing the Time Stream of Benefits from State and Local Government Use of LANDSAT Data: An Application of Demand-Revealing Processes (with R. Deacon and D.S. Simonett)	<i>Proceedings of the Second Conference on the Economics of Remote-Sensing Information Systems</i> , San Jose, California, 1978, 133-153.	Refereed conference proceedings
11	1979	Migration, Risk Aversion, and Regional Differentiation	<i>Journal of Regional Science</i> , 19, 31-45.	Article
12	1979	A Note on the Consequences of Risk Aversion and Age for Duration of Stay Effects in a Heterogeneous Population	<i>Geographical Analysis</i> , 11, 1-22.	Article
13	1979	The Spatial Equity of the California Sales Tax (with P. Shapiro)	<i>Economic Geography</i> , 55, 135-146.	Article
14	1979	A Decision-Making and Search Model of Intra-Urban Migration (with W.A.V. Clark, J.O. Huff and P. Shapiro)	<i>Geographical Analysis</i> , 11, 1-22.	Article
15	1979	Modelling Information in a Spatial Context (with W.A.V. Clark)	<i>Annals of the Association of American Geographers</i> , 69, 575-588.	Article
16	1979	What's Happened to the California Sales Tax? (with P. Shapiro and R. Deacon)	<i>National Tax Journal</i> , 32, 305-312.	Article
17	1979	Environmental Quality and the Economic Development (with P. Shapiro and T. Miyao )	<i>Environment and Planning</i> , 11, 1147-1156.	Article
18	1980	An Analysis of the Effects of Information Revision on the Outcome of Housing Market Search with Special Reference to the Influence of Realty Agents (with F. Mertz)	<i>Environment and Planning</i> , 12, 155-174.	Article

#	YEAR	TITLE and AUTHORS	PUBLISHER	CATEGORY
19	1980	On the Efficiency and Optimality of Spatially Structured Information Fields with Some Implications for Heterogeneous Social Aggregates	<i>Geographical Analysis</i> , 12, 1-20.	Article
20	1980	Preferences for Non-Market Goods Revealed Through Market Demands (with P. Shapiro)	<i>Advances in Applied Micro-Economics</i> 1, 105-122.	Article
21	1980	"Housing Market Search: Information Constraints and Efficiency (with W.A.V. Clark)	<i>in Residential Mobility and Public Policy</i> , ed. W.A.V. Clark and E.G. Moore, Sage Publications, 100-125.	Refereed chapter
22	1980	Intransitivity, the Spatial Interaction Model and U.S. Migration Streams	<i>Environment and Planning</i> , 12, 1131-1144.	Article
23	1981	Transition Probabilities and Behavior in Master Equation Descriptions of Population Movements	<i>Proceedings of the NATO Conference on Dynamic Spatial Models</i> , Reidel	Conference proceedings
24	1981	Genetic Algorithms Applied to Calibration of an Information Driven Model on U.S. Migration Patterns (with K. De Jong)	<i>Modelling and Simulation</i> , Proceedings of the 12th Annual Pittsburgh Conference, Pittsburgh, Pa., 955-961	Refereed conference proceedings
25	1982	Housing Markets, Search Behavior and Expected Utility Theory I: Measuring Preferences for Housing (with W.A.V. Clark)	<i>Environment and Planning A</i> , 14, 681-698.	Article
26	1982	Housing Markets, Search Behavior and Expected Utility Theory II: Processes of Search (with W.A.V. Clark)	<i>Environment and Planning A</i> , 14, 717-737.	Article
27	1982	A Family of Spatial Interaction Models Incorporating Information Flows and Choice Set Constraints Applied to U.S. Interstate Labor Flows (with P.B. Slater)	<i>International Regional Science Review</i> , 6, 15-31.	Article
28	1982	Spatial Externalities and the Stability of Interacting Populations Near the Center of a Large Area (with G.J. Papageorgiou)	<i>Journal of Regional Science</i> , 22, 1-18.	Article

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29	1982	Information Provision: An Analysis of Newspaper Real Estate Advertisement (with W.A.V. and J. Onaka)	<i>in Modelling Housing Market Search</i> , ed. W.A.V. Clark, Croom Helm, London, 160-186.	Chapter
30	1982	A Computational Model of Evaluation Based on the Cognitive Structuring of Episodic Knowledge (with A.A. Mitchell and R. Meyer)	<i>Advances in Consumer Research</i> , Vol. IX, 136-143.	Article
31	1982	The Applicability of Computational Process Models for Representing Consumer Behavior (with A.A. Mitchell)	<i>Advances in Consumer Research</i> , Vol. IX	Article
32	1982	The Implications of Computational Process Models for Spatial Behavior and Cognition (with J.W. Pellegrino and R.G. Golledge)	<i>Geographical Analysis</i> , 14, 305-325.	Article
33	1983	Agglomeration and Spatial Externalities (with G.J. Papageorgiou)	<i>Econometrica</i>	Article
34	1983	Computational Process Models for Individual Decision-Making	<i>in Cities and Regions as Non-Linear Systems</i> R.W. Crosby (Ed.), American Association for Advancement of Science, Westview Press, Boulder, CO, 175-210.	Chapter
35	1983	More Thoughts on Theory in the Social Sciences	<i>Geographical Analysis</i>	Article
36	1983	General Representational Formalisms and Search Procedures for Inferring Models from Categorical Data	<i>in Analysis of Qualitative Spatial Data</i> ed. P. Nijkamp, H. Leitner, and N. Wrigley, Martins Nijhoff, NATO ASI, Behavioral and Social Science #22, 679-690.	Refereed chapter
37	1983	Psychological Foundations of Individual Choice Behavior and a New Class of Decision-Making Models (with C.G. Lundberg)	<i>in Recent Developments in Spatial Analysis: Methodology, Measurement, Models</i> G. Bahrenberg, M.M. Fisher and P.N. Nijkamp (Eds.), Gower Publishing Company, Aldershot	Refereed chapter
38	1984	Deriving and Testing Production System Models of Sequential Decision-Making Behavior (with W.A.V. Clark and J.W. Cotton)	<i>Geographical Analysis</i> , 16, 191-222.	Article

#	YEAR	TITLE and AUTHORS	PUBLISHER	CATEGORY
39	1984	Artificial Intelligence and its Applicability to Geographical Problem-Solving	<i>Professional Geographer</i> , 36, 147-158.	Article
40	1984	Knowledge-Based Control of Search and Learning in a Large-Scale GIS (with M. Pazner)	<i>Proceedings of the International Symposium on Spatial Data Handling</i> , D.F. Marble and R. Brassel (Eds.), Geographisches Institut, Zurich.	Refereed conference proceedings
41	1984	A Knowledge-Based System for Answering Queries Concerning Geographic Objects (with M. Pazner)	<i>Proceedings of the Pecora 9 Symposium, Spatial Information Technologies for Remote Sensing, Today and Tomorrow</i> , IEEE Computer Society Press, pp 286-289.	Conference proceedings
42	1985	Production System Models of Residential Search Behavior: A comparison of behavior in computer-simulated and real-world environments (with W.A.V. Clark)	<i>Environment and Planning A</i>	Article
43	1985	A Conceptual Model and Empirical Analysis of Children's Acquisition of Spatial Knowledge (with R.G. Golledge, J.W. Pellegrino, J.W., S. Doherty and S.P. Marshall)	<i>Journal of Environmental Psychology</i> , 5, 125-152.	Article
44	1985	Functional Invariance under Spatial Aggregation from Continuous Spatial Interaction Models (with M. Schwab)	<i>Geographical Analysis</i> , 17, 217-230	Article
45	1985	Control of Spatial Search for Queries in a Knowledge Based Geographical Information System (with D. Peuquet)	<i>Proceedings of the International Conference on Advanced Techs. for monitoring and processing Global Environmental, Data, Remote Sensing Society</i> , London, England, pp. 439-52	Refereed conference proceedings
46	1987	An Analysis of the Efficacy and Efficiency of Hierarchical Procedures for Computing Trajectories over Complex Surfaces (with R.E. Parker)	<i>European Journal of Operations Research</i> , 30, 327-338	Article
47	1987	Requirements and Principles for the Implementation and Construction of Large-Scale Geographic Information Systems (with S. Menon, J.L. Star and J.E. Estes)	<i>International Journal of Geographical Information Systems</i> , 1, 13-31	Article

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48	1987	KBGIS-II: A Knowledge-based Geographical Information System (with D.P. Peuquet, S. Menon, and P. Agarwal)	<i>International Journal of Geographical Information Systems</i> , 1(2), 149-172.	Article
49	1987	Knowledge about Hand Shaping and Knowledge about Objects (with R. Klatzky, B. McCloskey, S. Doherty, J. Pellegrino)	<i>Journal of Motor Behavior</i> , 19(2), 187-213.	Article
50	1987	Computable Functions and Complexity in Neural Networks (with O. Egecioglu)	<i>in Real Brains, Artificial Mind</i> , J. L. Casti and A. Karlquist (Eds), Elsevier, 135-164.	Chapter
51	1987	The Calibration and Neural Networks using Genetic Algorithms with special application to Finding Optimal Paths over Two-Dimensional Surfaces (with G.A. Pitney and D. Greenwood)	<i>Proceedings of First annual Workshop on Space Operations, Automation and Robotics</i> , Johnson Space Center, NASA, Houston, Texas.	Refereed conference proceedings
52	1988	Multi-Colored Quadtrees for GIS: Exploiting Bit-Parallelism for Rapid Boolean Overlay (with S. Menon and G. Peng)	<i>Pattern Recognition Letters</i> , 8, 171-179	Article
53	1988	Multi-Component Object Search using Spatial Constraint Propagation (with S. Menon)	<i>Proceedings of the International GIS Symposium</i> , Arlington, VA, NASA, Washington, D.C, v.II, 281-293	Article
54	1988	Least Cost Paths Through Space (with P. Gahinet)	<i>in Geographical Systems and Systems of Geography</i> , ed. W.J. Coffey, University of Western Ontario, Department of Geography, 153-172.	Chapter
55	1988	Space Efficient Hierarchical Structures: Relatively Addressed One-to-Four Autumnal Quadtrees for GIS (with G. Peng)	<i>Proceedings of the International GIS Symposium</i> , Arlington, NASA, Washington, D.C., v.II 405-414	Refereed conference proceedings
56	1988	Multicolored Quadtrees for GIS: Exploiting Bit-Parallelism for Rapid Boolean Overlay (with S. Menon and G. Peng)	<i>Proceedings of the International GIS Symposium</i> Arlington, VA, NASA, Washington, D.C., v.II 371-383.	Refereed conference proceedings
57	1988	A Boundary Matching Algorithm for Connected Component Labeling Using Linear Quadtrees (with S. Menon)	<i>Image and Vision Computing</i>	Article

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58	1990	NAVIGATOR: An AI-Based Model of Human Way-Finding (with S. Gopal)	<i>in Spatial Choices and Processes</i> , ed. M. Fischer, P. Nijkamp, and G. Papageorgiou, North-Holland Studies in Regional Science and Urban Economics, Volume 21, 169-200.	Refereed chapter
59	1989	NAVIGATOR: A Psychologically Based Model of Environmental Learning Through Navigation (with S. Gopal and R. Klatzky)	<i>Journal of Environmental Psychology</i> , 9, pp. 309-331	Article
60	1989	Asynchronous, Iterative, and Parallel Procedures for Solving the Weighted Region Least Cost Path Problem (with G.Peng and P. Gahinet)	<i>Geographical Analysis</i> , 21, No. 2, pp. 147-166	Article
61	1989	Space Efficient Hierarchical Structures: Relatively Addressed One-To-Four Autumnal Quadrees for GIS (with G. Peng)	<i>Image and Vision Computing</i>	Article
62	1989	Search for Multicomponent Objects in Large Spatial Databases (with S. Menon)	<i>Proceedings of the FODO Conference</i> , Paris, pp. 246-251	Refereed conference proceedings
63	1989	A Note on the Determinants and Eigenvalues of Distance Matrices (with M. Marcus)	<i>Linear and Multilinear Algebra</i> , Vol. 25, pp. 219-230.	Article
64	1989	A Declarative Spatial Query Processor for GIS (with S. Menon)	<i>Photo-Grammetric Engineering and Remote Sensing</i> , 55, pp. 1593-1600	Article
65	1990	A Knowledge-Based, Two-step Procedure for Extracting Channel Networks from Noisy DEM Data (with X. Z. Zhan and G. Peng)	<i>Computers and Geoscience</i> , 16 (6), 777-786	Article
66	1990	Human Way-Finding in an Urban Environment: a performance analysis of a computational process model (with S. Gopal)	<i>Environment and Planning A</i> , 22, pp. 169-191	Article
67	1990	Design and Implementation of Large Spatial Databases (with A. Buchmann, O. Gunther, and Y-F Wang)	<i>Proceedings of the First Symposium SSD89</i> , Lecture Notes in Computer Science 409, Springer-Verlag, Heidelberg.	Book

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68	1990	Genetic Design of Processing Elements for Path Planning Networks (with G. Pitney and D. Greenwood)	<i>Proceedings of the International Joint Conference on Neural Networks</i> , San Diego	Refereed conference proceedings
69	1990	Experimental Performance Evaluations of Spatial Access Methods (with G. Peng)	<i>Proceedings of 4th International Symposium on Spatial Data Handling</i> , Zurich, Switzerland, pp. 991-1002	Refereed conference proceedings
70	1991	Knowledge Based Approaches in GIS	<i>in Handbook of GIS</i> , Ed. D.Rhind, M.F.Goodchild, and D. Maguire, Longmans, 413-425.	Refereed chapter
71	1990	Report on Workshop on Very Large Spatial Databases (with A. Frank)	<i>Journal of Visual Languages and Computing</i> , 1, 291-309	Article
72	1991	Integration of Remote Sensing and GIS: Data and Data Access	<i>Photogrammetric Engineering and Remote Sensing</i> , 57, 669-675	Article
73	1991	An Object-Based Data Model and a Deductive Language for Spatio-Temporal Database Applications (with Ramakrishnan, R. and A. Voisard)	<i>Proceedings of the International Workshop on DBMS for Geographical Applications</i> , ESPRIT BRA Working Group, Lecture Notes in Computer Science, Springer Verlag	Conference proceedings
74	1989	Model and Sensor Based Precise Navigation by an Autonomous Mobile Robot (with Y. Kanayama and B. Hartman)	<i>Proceedings of the International Conference on Advanced Robotics</i> , Columbus, Ohio, pp. 98-10	Refereed conference proceedings
75	1992	Algebraic Approach to Spatial Reasoning (with K. Park)	<i>International Journal for Geographic Information Systems</i> , 6(3), 177-192	Article
76	1992	Towards a Logic-based Language for Modeling and Database Support in Spatio-temporal Domains	<i>Proceedings of the Fifth International Symposium on Spatial Data Handling</i> , Charleston, South Carolina, IGU Commission on GIS, 592-601	Refereed conference proceedings
77	1993	Database and Modeling Systems for the Earth Sciences (with J. Su, D. Agrawa,l and A. El Abbadi)	<i>IEEE Bulletin on Data Engineering</i> , 16 (1), 33-37	Article
78	1993	MDBS: A Modeling and Database System to Support Research in the Earth Sciences(with J. Su, D. Agrawal, and A. El Abbadi)	<i>Proceedings of the NSF Scientific Database Projects</i> , ed. W.W.Chu,, A.F.Cardenas and R.K.Taira, AAAS Workshop on Advances in Data Management for the Scientist and Engineer, Boston, Massachussetts 90-99.	Chapter

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79	1993	Developing Applications with CORAL (with A. Saran et. al.)	<i>Proceedings of Workshop on Programming with Logic Databases</i> , Vancouver, BC.	Workshop proceedings
80	1995	Computational Modeling Systems to Support the Development of Scientific Models (with J. Su, A. Saran, and A. Sastri)	<i>in GIS and Environmental Modeling: Progress and Research</i> , ed. M. Goodchild et al, GIS World Inc, Colorado	Conference proceedings
81	1994	On the Integration of Database Systems and Computational Support for High-Level Modeling of Spatio-Temporal Phenomena	<i>in Innovations in GIS</i> , ed M. Worboys, Taylor and Francis, London, 11-24	Chapter
82	1995	Amazonia: a System for Supporting Data-Intensive Modeling (with J. Su and A. Saran)	<i>in Integration of Geographic Information Systems and Remote Sensing</i> , ed J. Star, J. Estes, and K. McGwire, Cambridge University Press, 79-110.	Chapter
83	1994	Finitely Representable Spatial Objects and Efficient Computation. Algorithms and Computation (with Y. Chen)	<i>Proceedings of 5th International Symposium, ISAAC '94</i> , ed. D. Du and A. Zhang, Springer-Verlag, New York, 181-189	Refereed conference proceedings
84	1994	Virtual Structures: a Technique for Supporting Scientific Database Applications (with J.Su and A. Saran)	<i>in Entity-Relationship Approach: ER '94</i> , 13th International Conference on the Entity-Relationship Approach Ed. P. Loucopoulos, Lecture Notes in Computer Science 881, Springer-Verlag, Berlin, 491-512.	Refereed conference proceedings
85	1994	Experiences in the Design of a Kernel for Computational Modeling Systems (with A. Saran, D. Agrawal, and A. El Abbadi)	<i>Proceedings of the 6th International Conference on the Management of Data, Bangalore, India</i> ed. P. Sadanandan and S. Chakravarthy, Tata McGraw Publishing Company, New Dehli, 189-206	Refereed conference proceedings
86	1995	System Abstraction and Interface for Interoperable Server Objects in OMEGA (with K. Park)	<i>Proceedings of RIDE-DOM'95, Taiwan</i>	Refereed conference proceedings
87	1995	Computational Modeling Systems (with J. Su, A. El Abbadi, D. Agrawal, G. Alonso, and A. Saran)	<i>Journal of Information Systems</i> , 20(2) 127-153	Article
88	1995	Distributed Access System for Uniform and Scalable Data and Service Access(with A. M. Sastri, D. Agrawal, and A. El Abbadi)	<i>Proceedings of the IEEE Symposium on Mass Storage Systems</i> , Monterey, CA.	Refereed conference Proceedings

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89	1995	Conservation Principles and the Initiation of Channelized Surface Flows (with G. Merchant)	<i>in Natural and Anthropomorphic Influences in Geomorphology</i> , ed. J. Costa, A. J. Miller, K. W. Potter, and P. Wilcock, American Geophysical Union, Geophysical Monograph 89, pp. 1-25	Refereed chapter
90	1995	Alexandria Digital Library: Rapid Prototype and Metadata Schema (with C. Fischer, J. Frew, M. Larsgaard, and Q. Zheng)	<i>Advances in Digital Libraries</i> , ed. N. Adam, M. Halem, and Y. Yesha Lecture Notes in Computer Science, Springer Verlag,	Refereed conference proceedings
91	1995	The WWW Prototype of the Alexandria Digital Library (with D.Andresen et. al.)	<i>Proceedings of the International Symposium on Digital Libraries</i> Tsukuba, Japan	Conference proceeding
92	1996	A Digital Library for Geographically Referenced Materials (with D. Andresen et. al.)	<i>IEEE Computer</i> , May, 1996, 54-60.	Article
93	1995	Scalability Issues for High Performance Digital Libraries on the World Wide Web (with D. Andresen, T. Yang, and O. Ibarra)	<i>Proceedings, Advances In Digital Libraries 96 (ADL'96)</i>	Refereed conference proceedings
94	1996	A General Framework for Meta-information and Catalogs of Digital Libraries (with S. Geffner and J. Gottsegen)	<i>Proceedings, First IEEE Workshop on Metadata, Silver Spring, MD.</i>	Refereed conference proceedings
95	1996	The Meta-information Environment of Digital Libraries	<i>D-Lib Magazine, July.</i>	Article
96	1996	The Alexandria Digital Library Testbed (with J. Frew et. al.)	<i>D-Lib Magazine, July.</i>	Article
97	1996	Parallelizing Multidimensional Index Structures (with R. Kanth, D. Agrawal, A. El Abbadi and A. Singh)	<i>IEEE Symposium on Parallel and Distributed Processing, New Orleans, pp. 376-383</i>	Refereed conference proceedings
98	1996	Efficient Retrieval for Browsing Large Image Databases (with D. Wu, D. Agrawal, A. El Abbadi, and A. Singh)	<i>Proceedings of the 5th International Conference on Information and Knowledge Management 96, pp 11-18, Rockville, Maryland</i>	Refereed conference proceedings

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99	1997	Scalable Access Within the Context of Digital Libraries (with X. Cheng et. al.)	<i>Proceedings, Advances In Digital Libraries 97 (ADL'97), 70-81</i>	Refereed conference proceedings
100	1997	A Framework for Meta-Information in Digital Libraries (with K. Beard)	<i>in Managing Multimedia Data: Using Metadata to Integrate and Apply Digital Data</i> , ed. A. Sheth and W. Klas, McGraw Hill.	Book chapter
101	1997	A Geographic Knowledge Representation System for Multimedia Geospatial Retrieval and Analysis (with H.C. Chen, M. Larsgaard, and L. Hill)	<i>Journal of Digital Libraries, 1(2), 132-152.</i>	Article
102	1997	Introduction: Meta-information in Digital Libraries,	<i>Journal of Digital Libraries, 1(2), 105-107</i>	Editorial
103	1997	Browsing and Placement of Multiresolution Images on Parallel Disks (with S. Prabhakar, D. Agrawal, A. El Abbadi, and A. Singh)	<i>Proceedings of IEEE Conference on Multimedia Computing and Systems (ICMCS'97), Ottawa, Canada, 636-637</i>	Refereed conference proceedings
104	1997	Meta-Information Models for Georeferenced Digital Library Collections (with K. Beard and L. Hill)	<i>Proceedings of Second IEEE Metadata Conference Silver Spring, Maryland</i>	Refereed conference proceedings
105	1999	VCME: A Visual Interactive Environment for Computational Modeling Systems (with Y. Chen and Y.F. Wang)	<i>Encyclopedia of Microcomputers, Volume 24</i>	Encyclopedia Article
106*	1996	Scientific Modeling Using Distributed Resources (with A. Saran, D. Agrawal, A. El Abbadi, and J. Su)	<i>Proceedings of the Fourth ACM Workshop on Advances in Geographic Information Systems (ACM-GIS), Rockville, Md, 68-75</i>	Refereed Conference Proceedings
107	1997	Towards an Elementary Theory of Drainage Basin Evolution: I.The Theoretical Basis (with B. Birnir and G. Merchant)	<i>Computers and Geosciences, 23 (8), 811-822.</i>	Article
108	1997	Towards an Elementary Theory of Drainage Basin Evolution: II. A Computational Evaluation (with G. Merchant and B. Birnir)	<i>Computers and Geosciences, 23(8), 823-849</i>	Article
109	1997	Scalable Access Within the Context of Digital Libraries (with X. Cheng, et. al.)	<i>International Journal of Digital Libraries, 1 (4) 358-376</i>	Article

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110	1998	The Alexandria Digital Library Architecture. (with . Frew, M. Freeston, N. Freitas, L. Hill, G. Janee, K. Lovette, R. Nideffer, and Q. Zheng)	<i>Proceedings of the Second European Conference on Research and Advanced Technology for Digital Libraries, Heraklion, Crete, Greece</i>	Refereed conference proceedings
111	1998	Smart Indexes for Efficient Browsing of Library Collections (with S. Geffner, A. El Abbadi, D. Agrawal, M. Larsgaard.)	<i>Proceedings of IEEE International Forum on Research and Technology Advances in Digital Libraries (ADL'98), 107-116</i>	Refereed conference proceedings
112	1999	Relative Prefix Sums: An Efficient Approach for Querying Dynamic OLAP Data Cubes (with S. Geffner, A. El Abbadi, D. Agrawal)	<i>Proceedings of the 15th International Conference on Data Engineering, Sydney, Australia, 328-335 (6/29/99 accepted)</i>	Refereed conference proceedings
113	1998	Adaptive Load Sharing for Clustered Digital Library Servers (with Zhu, H., T.Yang, Q.Zheng, D.Watson, O.Ibarra)	<i>Proceedings of 7th IEEE Symposium on High-Performance Distributed Computing (HPDC7-98), Chicago, pp. 235-242</i>	Refereed conference proceedings
114	1999	Alexandria Digital Library metadata creator with extensible markup language, Wang, Z., T.R.Smith, L. Hill	<i>Proceedings of the Third International Conference on Conceptions of Library and Information Science (CoLIS 3), Dubrovnik, Croatia</i>	Refereed conference proceedings
115 <sup>#</sup>	1999	Alexandria Digital Library: User evaluation studies and system design, Hill, L. L., Dolin, R., Rae, M.A., Carver, L., Frew, J., Larsgaard, M., T.R.Smith	<i>Journal of the American Society for Information Science (Special issue on Digital Libraries</i>	Article
116 <sup>#</sup>	2000	Adaptive Load Sharing for Clustered Digital Library Servers, Zhu, H., T.Yang, Q.Zheng, D.Watson, O.Ibarra, T.R.Smith	<i>International Journal of Digital Libraries, 2, 225-235</i>	Article

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117	1999	Browsing Large Digital Library Collections Using Classification Hierarchies, S.Geffner, D.Agrawal, A.El Ab-badi, T.R.Smith	<i>CIKM 195-201</i>	Refereed Conference Proceedings
118#	2000	Transient Attractors: Towards a Theory of the Graded Stream for Alluvial and Bedrock Channels, T.R.Smith, B. Birnir, and G.E. Merchant	<i>Computers and Geoscience (26) 541-580</i>	Refereed Journal Article
119##	2000	The Alexandria Digital Library Architecture with J. Frew, M. Freeston, N. Freitas, L. Hill, G. Janee, K. Lovette, R. Nideffer, T.R.Smith, Q. Zheng	<i>International Journal of Digital Libraries, 2, 259-268</i>	Refereed Journal Article
120##	2001	The Scaling of Fluvial Landscapes, B. Birnir, T.R.Smith, and G.E. Merchant	<i>Computers and Geosciences, 27, 1189-1216</i>	Refereed Journal Article,
121	2001	The Alexandria Digital Earth Prototype System, T.R.Smith, Janee, G., Frew, J., and A. Coleman.	Proceedings of Joint Conference on Digital Libraries, Virginia.	Refereed Conference Proceedings, pp 118-119.
122	2001	The Alexandria Digital Library Project, T.R.Smith, Frew, J., Janee, G., L. Hill.	In: Global Digital Library Development in the New Millemnnium: fertile ground for distributed cross-disciplinary collaboration. Edited by Ching-Chih Chen. Beijing: Tsinghua University Press, pp.287-298.	Book Chapter
123	2001	A Content Standard for Computational Models Hill, L.L., Crosier, S.J., Smith, T.R.,, Goodchild,M.F.	D-Lib Magazine, Volume 7 Number 6	Online journal
124	2001	Learning Spaces in Digital Libraries, Coleman, A., Smith, T.R., Buchel, O. and Mayer, R.	Lecture Notes in Computer Science, Springer-Verlag (Proceedings of Fifth European Conference on Research and Advanced Technology for Digital Libraries Darmstadt, Germany.)	Refereed Conference Proceedings
125	2002	Structured Models of Scientific Concepts for Organizing, Accessing, and Using Learning Materials, T.R.Smith and M.L.Zeng	UCSB Department of CS Technical Report 2002-05.	Technical Report

#	YEAR	TITLE and AUTHORS	PUBLISHER	CATEGORY
126	2002	Structured Models of Scientific Concepts for Organizing, Accessing, and Using Learning Materials, T.R.Smith and M.L.Zeng.	Proceedings of the Seventh International Conference on Knowledge Organization, Granada, Spain.	Refereed Conference Proceedings
127	2002	The Organization of Knowledge Spaces for a Virtual Learning Environment Supported by a Digital Library, T.R.Smith, O.Agapova, M. Freeston, A. Ushakov	Russian Conference on Digital Libraries, Moscow.	Refereed Conference Proceedings
128	2002	Digital Libraries as Instructional Aids for Knowledge Construction, Mayer, R., Smith, T.R., Borgman, C.L., and L.T. Smart.	Educational Technology, 43, 38-42.	Refereed Journal Article
129	2003	Developing an Infrastructure for Sharing Environmental Models, Crozier, S., Goodchild, M., Hill, L., and T.R. Smith	Environment and Planning B: Planning and Design 30, Pp 487-501.	Refereed Journal Article
130	2003	The ADEPT Concept-based Digital Learning Environment, T.R. Smith, D.Ancona, O.Buchel, M.Freeston, W.Heller, R.Nottrott, T.Tierney, A.Ushakov	Proceedings of European Conference on Digital Libraries, Trondheim, Norway	Refereed Conference Proceedings

#	YEAR	TITLE and AUTHORS	PUBLISHER	CATEGORY
Since last rev				
131	2003	Some Aspects of Developing and Using the Digital Virtual Learning Environment in the Alexandria Digital Earth Prototype, T.R. Smith, A.Ushakov, W.Heller, G.Janee	Russian Conference on Digital Libraries	Refereed Conference Paper
132	2007	The Stochastic Theory of Fluvial Landsurfaces B.Birnir, J.Hernandez, and T.R.Smith	Journal of Non-Linear Science, 17(1), 13-57.	Refereed Journal Article
In Press				
B-1	2008	Semantic Tools to Support the Use and Construction of Concept-based Learning Spaces, T.R. Smith, M.L. Zeng	in E-Learning for Geographers: Online Materials, Resources and Repositories, ed P. Rees, et al., IDEA GROUP Inc.	Refereed Book Chapter
Submitted				
C-1	2008	Convectively-Driven Diffusion and the Spacing of River Channels, T.R.Smith	Submitted to Journal of Geophysical Research (Earth Surface)	Refereed Journal Article

## PART II: TEACHING

### Catalog Courses

Qtr	Course no., Title	Class Type	Units	Hrs/Wk	Enrollment	Eval. Avail.
F03	SABBATICAL LEAVE					
W04	SABBATICAL LEAVE					
S04	SABBATICAL LEAVE					
F04	Cmpsc 165A, Artificial Intelligence	Lecture	4.0	3.0	37	YES
F04	Geog 200B, Intro Geog Research	Seminar	4.0	3.0	13	NO
W05	Cmpsc 165B, Machine Learning	Lecture	4.0	3.0	28	YES
W05	Geog 3B, Intro to Landsurface Geography	Lecture	4.0	3.0	79	YES
W05	Geog 200B, Intro Geog Research	Seminar	4.0	3.0	14	YES
F05	Cmpsc 165A, Artificial Intelligence	Lecture	4.0	3.0	43	YES
F05	Geog 200A, Intro Geog Research	Seminar	4.0	3.0	11	YES
W06	SABBATICAL LEAVE					
S06	Geog 3B, Intro to Landsurface Geography	Lecture	4.0	3.0	70	YES
S06	Cmpsc 165A, Artificial Intelligence	Lecture	4.0	3.0	40	YES
F06	Geog 3B, Land, Water, and Life	Lecture	4.0	3.0	61	YES
W07	Cmpsc 165B, Machine Learning	Lecture	4.0	3.0	18	YES
S07	Geog 3B, Land, Water, and Life	Lecture	4.0	3.0	90	YES
F07	Geog 3B, Land, Water, and Life	Lecture	4.0	3.0	100	YES
W08	Cmpsc 165B, Machine Learning	Lecture	4.0	3.0	15	YES
S08	Geog 3B, Land, Water, and Life	Lecture	4.0	3.0	150	YES

## Graduate Degree Committees Chaired

MS/MA Committees Chaired:

Date	Student	Degree	Thesis Title/Exam
1983-89	U. Joglekar	MS, Comp Sci	Thesis: Learning to Read Aloud: a Neural Network Approach Using Sparse, Distributed Memory
1984-85	N. Darling	MA, Geog	Examination
1984-85	M. Schwab	MA, Geog	Thesis: Spatial Aggregation from Continuous Spatial Interaction Models
1985-86	R. Shah	MS, Comp Sci	Thesis: Inferring Vertical from Oblique Images
1985-86	T. Mileo	MS, ECE	Thesis: Relaxation Labelling of Occluded Regions in Simple Scenes
1985-89	S. Menon	MS, Comp Sci	Thesis: Connected Component Labelling Using Linear Quad- and Oct-trees
1986-90	P. Ghosh	MS, Comp Sci	Thesis: An Indexed Based Rule Processor for a Relational DBMS
1986-1988	B. Hartman	MS, Comp Sci	Thesis: Model and Sensor-based Precise Navigation of an Autonomous Mobile Robot
1986-92	G. Pitney	MS, Comp Sci	Thesis: Genetic Adaptation of Processing Elements for Path Planning Networks
1987-88	V. B. Kraemer	MS, Comp Sci	Thesis
1987-89	M. Pinter	MS, Comp Sci	Thesis: A Connectionist Approach to Natural Language Understanding
1987-89	Z. Wu	MS, Comp Sci	Thesis: Chain Index Vector Quantization
1989-90	A. Ruan	MS, Comp Sci	Thesis: Constraint Based Methods for Solving Queries in Spatial Database Systems
1989-91	N. Trevidi	MS Comp Sci	Thesis: Metadata for Spatial Databases
1990-92	T. Nichols	MS, Comp Sci	Thesis: Extracting Metadata from Compression Codes
1991-92	D. Tombroff	MS, Comp Sci	Examination:
1992-95	K. Carlsson	MS, Comp Sci	Thesis: Use of Object-Oriented Constructs in a Computational Modeling System for Earth Scientists
1996-97	S. Suri	MS, Comp Sci	Thesis:
1998-99	Z. Wang	MS, Comp Sci	Thesis: <i>Digital Library Creator with Extensible Markup Language</i>
1999-2001	It-Kai Chang	MS, Comp Sci	Thesis:

Since last review

PhD Committees Chaired:

Date	Student	Degree	Thesis title/Exam
1983-85	M. Pazner	Ph.D., Geog	Thesis: Geographic Knowledge Base Design
1984-85	L. Gorenflo	Ph.D., Geog	Thesis: On the Structure of Rule-Based Decision Making in Spatial Search
1984-85	K. Chow	Ph.D., Comp Sci	Thesis: Relaxation Problem Solving
1985-1988	S. Gopal	Ph.D., Geog	Thesis: A Computational Model of Spatial Navigation
1985-88	S. Menon	Ph.D., Geog	Thesis: Spatial Search in a Hierarchical Image-Based Geographical Information System
1985-89	A. Peng	Ph.D. Geog	Thesis: Spatial Data Structures and Spatial Access Methods for Knowledge Based Geographic Information System II
1987-89	D. Wolpert	PhD, Physics	Thesis: Generalization Surface Fittings and Network Structures of Neural Nets
1990-95	Y. Chen	PhD, Comp Sci	Thesis: V-CMS: a Visual Computational Modeling System
1991-95	K. Park	PhD, Comp Sci	Thesis: SOUL of OMEGA: Design and Implementation of an Object-based Modeling Environment for Geoscientific Applications
1992-1996	A. Saran	PhD, Comp Sci	Thesis: <i>Distributed Resource Management and Interoperability in Computational Modeling Systems</i>
1995-99	S. Geffner	PhD Comp Sci	Thesis: <i>Systems Support for Exploratory Browsing Queries and Summation of Query Results in Very Large Databases</i>
1996-99	M. Horhammer	PhD	Thesis: <i>Multidimensional Indexing with BANG!</i>
1994-2001	G. Merchant	PhD Geog	Thesis: <i>An Elementary Theory of Drainage Basis Evolution</i>

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Since last review

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## Other Advising Activities

# PART III. PROFESSIONAL ACTIVITIES

## Invited Contributions

Years	Position	Type of Service
1977	Invited participant	Conference on Mathematical Structure in Human Affairs, Pennsylvania State University.
1979	Invited contributor	Annual Meetings of the Association of American Geographers.
1979	Invited contributor	Conference on Residential Mobility and Public Policy, UCLA.
1979	Invited contributor	Annual Meeting of the Association of American Geographers, Philadelphia, PA.
1980	Invited guest	Quantitative Methods Study Group, IBG, Leeds, England.
1980	Invited contributor	Annual Meeting of the Association of American Geographers, Louisville, KY.
1980	Invited lecturer	NATO Conference on Dynamic Spatial Models, Bonas, France.
1980	Invited participant	Workshop on Housing Market Search, UCLA.
1980	Invited participant	Annual Meeting of the Regional Science Association, Milwaukee, WI.
1981	Invited contributor	Twelfth Annual Conference on Modelling and Simulation, Pittsburgh, PA.
1981	Invited contributor	Annual Meeting of Association for Consumer Research, St. Louis, MO.
1981	Invited participant	Workshop on Geographical Data Systems, USGS, Reston, VA.
1981	Invited participant	NSF/DOT Conference on Non-Linear Dynamic Theory and Urban and Regional Systems, Washington, D.C.
1981	Invited lecturer	NATO Conference on Dynamic Spatial Models, Florence, Italy.
1982	Invited participant	NSF Workshop on Geographical Databases, HI.
1982	Invited lecturer	IIASA Conference on Human Settlement and Migration, IIASA, Laxberg, Austria.
1983	Invited participant	NATO Advanced Research Workshop on Analysis of Qualitative Spatial Data, Amsterdam.
1983	Invited contributor	Annual Meeting for Association of American Geographers, Denver, CO.
1984	Invited lecturer	International Symposium on Spatial Data Handling, I.G.U., Zurich, Switzerland
1984	Keynote address	fifth Alaska Conference on Computer Graphics and Geoprocessing, Anchorage, AK.
1984	Invited contributor	IGU Working Group on Systems Analysis and Mathematical Models, Besancon, France.
1985	Invited lecturer	Workshop on Modelling Complex Systems. I. Prigogine Center for Studies in Statistical Mechanics, University of Texas, Austin.
1985	Invited lecturer	International Conference on Advanced Technology for Monitoring and Processing Global Environmental Information, Remote Sensing Society, London, England.
1985	Invited lecturer	Jacob Marshak Interdisciplinary Colloquium on Mathematics in the Behavioral Sciences, UCLA.
1985-86	Invited lecturer	Workshop on Brain Research, Cognition and Artificial Intelligence, Abisko, Sweden.
1987	Invited lecturer	Micro Europe '87: Conference organized by DOD, Navy Regional Automation Center.

Years	Position	Type of Service
1988	Invited lecturer	IGU/International Congress of Psychology: Conference on "Environment and Behavior: Future Research Directions", Sidney, Australia.
1988	Invited lecturer	IGU/Mathematical Modelling Working Group Conference on "Recent Trends in Mathematical Modelling", Canberra, Australia.
1988	Invited lecturer	SUNY Buffalo workshop on "Cognitive Aspects of Geographic Space", Buffalo, NY.
1988	Invited Plenary Address	National Symposium on GIS, Denver.
1988	Invited lecturer	Advances in GIS Seminar Series, University of Maryland
1989	Invited lecturer	Ohio State University.
1990	Invited lecturer	California State University at San Diego.
1991	Keynote address	Swedish Cartographic Society, Linköping, Sweden.
1991	Invited lecturer	International Workshop on Spatial Databases, (ESPRIT BRA) Capri, Italy.
1993	Invited contributor	First Workshop on Principles and Practise of Constraint Programming, Newport, Rhode Island (ONR).
1993	Keynote Address	1st National Conference, GISRUK, Keele, England.
1993	Invited paper	AAAS, Boston.
1994	Invited lecturer	Advanced School on Spatial Data Handling, Venice, Italy.
1994	Invited lecturer	AISRP Workshop IV, University of Colorado, Boulder.
1995	Invited speaker	Special Session on Digital Libraries, AAAS, Atlanta, GA
1995	Invited speaker	International Symposium on Digital Libraries, Tsukuba, Japan.
1995	Invited panel discussant	National Geodata Forum, Washington, DC.
1995	Invited speaker	Science Information Systems Interoperability Conference (NASA), University of Maryland, MD.
1996	Invited Panel Discussant	First IEEE Workshop on Metadata, Silver Spring, MD.
1996	Invited Speaker	Metadata Workshop II, University of Warwick, England
1996	Invited Speaker	Gilbert Club, UC Berkeley.
1997	Keynote speaker	Joint European Conference on Geographical Information (JEC-GI97), Vienna, Austria.
1997	Invited presenter/discussant	SC97, San Jose, CA.
1998	Invited speaker	Joint Russian-American Digital Library Seminar, Moscow, Russia.
1998	Invited attendee	NSF Workshop on Distributed Information, Computation, and Process Management for Scientific and Engineering Environments, Herndon, VA.
1998	Invited Keynote Speaker	Distributed GeoLibraries Workshop, NRC/NAS Washington DC.
1999	Invitee speaker	Conference on Nonlinear Dynamics and Scientific Computing, ITP, UCSB, April, 1999.
1999	Speaker	Fluvial Landscapes and their Scaling, Fifth SIAM Conference on Applications of Dynamical Systems, Snowbird, Utah.

Years	Position	Type of Service
2000	Invited Principal lecturer	Summer School in Geomorphological Fluid Mechanics, Aoasta, Italy.
2000	Invited Lecturer	UCLA Department of Geography Colloquium, LA.
2000	Invited Lecturer	Pan American Conference on Digital Libraries and International Symposium on Spatial Data Infrastructure Bogota, Columbia
2000	Invited Lecturer	UCLA Department of Geography Colloquium, LA.
2001	Invited Presenter	NPACI Annual Meeting, San Diego, CA.
2001	Invited lecturer	Conference on Global Digital Library Development in the New Millemnnium, Beijing, China.
2001	Invited presenter	DLESE Annual meeting, Arizona.
2002	Invited Lecturer	DELOS Summer School on Digital Libraries, Pisa, Italy.
2002	Invited lecturer/participant	NSF-funded workshop on Scaling and non-linearity in hydrologic systems, UBC, Vancouver, Canada, June 2002.
2002	Invited lecturer	Database Seminar, Stanford University.
2002	Invited panel discussant	“Deeper representation of information resources: from metadata to semantic data”, ASIS Annual Meeting, Philadelphia, PA
2002	Invited member	Technical panel on NSDL, American Society for Engineering Education Conference, Montreal, Canada, June, 2002.
2002	Invited speaker	digital library research, NASA Ames Research Center, San Jose, California.
2002	Invited Participant	NSF panel on cyberinfrastructure in Geosciences, DC.
2002	Invited participant	NRC Workshop on Geospatial Information Washington, DC.
2003	Invited Presenter	NPACI Annual Meeting, San Diego, CA.
2003	NSF Distinguished Lecturer	CISE, NSF, DC.
2003	Invited Participant	NSF Post DL Futures Workshop on Future of Digital Libraries, Chatham, Massachussetts.

Years	Position	Type of Service
Since last rev		
2004	Invited Keynote Lecture	The Future of Digital Libraries in Canada (Workshop) UBC, Vancouver, Canada.
2008	Invited Lecturer	IPAM Workshop on Transport Systems in Geography, Geosciences, and Networks (OTWS3), UCLA, Los Angeles, CA.

## Professional Service

Years	Position	Type of Service
1978-79	Chair, Organizing Committee	Annual Meeting of the Association of Pacific Coast Geographers.
1978-79	Chair, Program Committee	Annual Meeting of the Association of Pacific Coast Geographers.
1978	Member	Faculty Forum on Energy (ARCO), Los Angeles.
1978	Session chair	Annual Meeting of the Association of Pacific Coast Geographers, Portland, Oregon.
1979	Session chair	Annual Meeting of the Association of Pacific Coast Geographers, Santa Barbara, California.
1980-1983	Executive Committee	Quantitative Methods Group, Association of American Geographers.
1983	Session chair	Annual Meeting of the Association of American Geographers, Denver, Colorado.
1984	Workshop leader	International Symposium on Spatial Data Handling, Zurich, Switzerland.
1985	Workshop leader/session chair	Conference on Advanced Technology for Monitoring and Processing Global Information, RSC, London, England.
1986-1995	Member	Editorial Committee, Geographical Information Systems.
1987	Member	National Symposium on GIS, National Academy of Sciences/National Research Council.
1987-88	Member	Science Advisory Panel, International Geographical Information Systems Symposium, American Association of Geographers.
1989	Organizer/Program Committee	Symposium on the Design of Large, Spatial Databases, Santa Barbara, CA.
1989	Workshop organizer/leader	Design of Large Spatial Databases, National Center for Geographic Information and Analysis, UCSB, CA.
1990	Workshop leader/session chair	International Symposium on Spatial Data Handling, Zurich, Switzerland.
1990-91	Member	Program Committee, Symposium on the Design of Large Spatial Databases, Zurich, Switzerland.
1991	Workshop leader	Knowledge-Based Techniques for Geographical Information Systems, Swedish Cartographic Society, Linköping, Sweden.
1991-94	Member	of Committee to review EPA's Environmental Monitoring and Assessment Program, National Academy of Science/National Research Council.
1992	Member	NSF panel to review proposals in Databases and Expert Systems.
1993	Member	Program Committee, Symposium on the Design of Large, Spatial Databases, Singapore.
1993	Member	NASA panel to review proposals in Applied Information Systems Research, Washington, DC.
1993-94	Member	Program Committee, International GIS Workshop on spatial data handling and query languages, Delft, Netherlands.
1994	Member	Review team of data management program for Shortgrass Steppe LTER, Colorado State University, Fort Collins.
1995	Member	Program Committee for SSD'95
1995	Session organizer/chair	Annual Meeting of the Association of American Geographers, Chicago.
1995	Member	NSF panel to review proposals in Databases and Expert Systems.
1995	Member	Editorial Board, International Journal of Digital Libraries.
1995	Member	Editorial Board, Geoinformatica.
1995	Member	Program committee, ADL96.
1995	Member	Program committee, DL96.

Years	Position	Type of Service
1995	Chair	NSF/ARPA/NSF Digital Library Initiative Committee.
1995	Organizer/leader	Third Workshop of the Digital Library Initiative, Santa Barbara.
1996	Panel Chair	First ACM Conference on Digital Libraries (DL96), Bethesda MD.
1996	Member	Proposal Steering Committee, San Diego Supercomputer Center
1996	Member	Steering Committee and Program Committee, SSD'97 Berlin.
1997	Member	Program Committee, Advances in Digital Libraries 1997
1977	Member	Program Committee, IEEE Metadata conference.
1977	Member	Program Committee, DL97
1997	Panel member	NSF workshop on Human-Centered Systems: Information, Interactivity, and Intelligence (HCS), Washington DC, February 1997
1997	Panel member	NSF workshop on Digital Libraries, Santa Fe, NM, 1997
1997	Invited Co-Organizer	NSF-sponsored workshop on Human Dimensions of Distributed Knowledge Environments, Santa Barbara, CA.
1997	Invited Session Chair	ADL97.
1997-8	Chair	Program Committee, ADL98, Santa Barbara.
1996-97	Guest editor	International Journal of Digital Libraries, Special issue on Metadata for Digital Libraries.
1997	Member	Program Committee, ATHENS 97 INTERNATIONAL CONFERENCE Urban, Regional, Environmental Planning and Informatics to Planning in an Era of Transition
1997	Member	Program Committee, ACM-GIS'97.
1997-98	Member	Program Committee, DL98, Pittsburg.
1997-98	Member	NAS/NRC Panel to Review NASA GSFC DAAC.
1998-99	Member	Program Committee for Third IEEE Meta-Data Conference, Bethesda, Md, April 1999.
1998-99	Member	Program Committee for the Sixth International Symposium on Large Spatial Databases (SSD '99) Hong Kong, China, Steering and Program Committees, Digital Libraries 99.
1999	Panel Co-Chair	1999 NSF Information and Data Management Workshop, Research Agenda for the 21st Century, March 1999, Los Angeles, California
1999	Attendee	DLI-2 All Projects Annual Meeting, Cornell University, NY.
1999-present	Member	Editorial Board, International Journal of Digital Libraries
1999-02	Member	NRC/NAS Computer Science and Telecommunications Board.
2001-2002	Member	NRC/NAS Committee on Intersectins Between Geospatial Information and Information Technology
2000	Member	Program Committee, ACM conference on Digital Libraries, San Antonio, Tx
2000	Attendee	NSF DLI-2 Principle Investigators Meeting, Roanoke, Va.
2001	Invited participant	NRC/NAS workshop on geospatial information, Washington, DC.
2001	Panel member	Digital Libraries in Geosciences, NSF Geo Division.
2001	Member	Program Committee, Joint Conference on Digital Libraries
2001	Member	Program Committee, European Conference on Digital Libraries
2001	Member	Program Committee, CIKM.
2002	Member	Program Committee, VLDB.
2002	Member	Program Committee, European Conference on Digital Libraries.
2003	Invited Participant	NSF Workshop on Future of Digital Libraries, Chatham, Massachusetts.
2003	Participant	JISC Workshop (NSF/SRC) Leeds, UK

Since last review

## Contracts and Grants

- A Decision-Making and Search Model of Intraurban Migration* (01/01/78-06/30/79): T. Smith, P. Shapiro, W. Clark, J. Huff. **\$136,927** (NSF).
- Spatial and Temporal Variation in Hedonic Prices for Housing in L.A. County* (07/01/79-10/15/79): P. Shapiro and T. Smith. **\$9,650** (HUD).
- Testing a Model of Information Use in a Spatial Context* (01/01/78-09/30/81): W. Clark, T. Smith, and J. Cotton. **\$39,900** (NSF).
- Cognitive Modelling in Urban and Regional Systems* (04/01/81-06/30/81): T. Smith. **\$9,643** (DOT).
- Improving Decision Process Modelling in Transportation* (09/15/81-09/15/82): T. Smith **\$9,695** (DOT).
- A Multilevel Analysis of US Migration Flows* Goodchild (09/30/82-04/01/83): T. Smith and P. Slater **\$171,313** (NIH).
- A Computational Process Approach to Children's Knowledge* Pellegrino (09/01/82-08/31/84): T. Smith R. Golledge **\$59,541** 09/01/82 (NSF).
- Knowledge Based Expert Systems for Crop ID* (07/01/82-06/30/83): T. Smith and J. Estes **\$18,050** (CALSPACE).
- Knowledge Based Engineering for DB Management and Use* (06/30/82-03/31/83): T. Smith and J. Estes **\$14,451** (USGS).
- Workshop in Non-Linear Decision Systems* (07/01/82-06/30/83): T. Smith **\$28,700** (NSF).
- Workshop on Interfacing Micro and Macro Models of Human Spatial Behavior* (09/01/83-08/31/84): T. Smith **\$11,140** (NSF).
- Knowledge Based Engineering for DB Management and Use* (07/01/83-06/30/84): T. Smith and J. Estes **\$65,000** (USGS).
- Knowledge Based Engineering for Spatial Data-Base Management and Use* (01/02/84-03/31/85): T. Smith and D. Peuquet **\$95,125** (DEC).
- Applying Artificial Intelligence to Large Networks* (12/01/83-03/31/84): T. Smith and J. Estes **\$14,315** (NASA).
- Constructing a Self-modifying Knowledge Based GIS* (01/01/84-06/30/85): T. Smith and D. Peuquet **\$83,271** (USGS).
- Constructing Geographic Expert Systems with Learning Capabilities* (07/01/84-06/30/87): T. Smith and R. Dubayah **\$40,600** (NASA).
- Knowledge Based Engineering for DB Management and Use* (10/31/86): T. Smith, J. Estes, and D. Peuquet **\$100,394** (NASA).
- Knowledge Based Engineering for DB Management and Use* (05/01/85-10/31/86): T. Smith and J. Estes **\$70,400** (NASA).
- Integrating Image Processing Capabilities Into A Knowledge-based Geographical Information System* (07/01/86-06/30/87): T. Smith **\$10,000** (CALSPACE).
- A Spatial Database for Improved Query Response with Language Processing and Vector Input Capabilities* (07/01/87-06/30/88): T. Smith **\$55,000** (USGS).
- A Comparative Analysis of the Application of Genetic Algorithms for Calibrating Artificial Neural Systems* (08/01/87-12/01/88): **\$55,750** (MICRO UC/ESL).
- Remote Sensing Information Science Research* (05/01/87-04/30/88): J. Estes, T. Smith, and J. Star **\$149,992** (NASA).
- Remote Sensing Information Science Research* (05/01/88-04/30/89); J. Estes, T. Smith, and J. Star **\$150,000** (NASA).
- A Spatial Data Base for Improved Query Response* (08/01/88-09/30/88): T. Smith **\$10,000** (USGS).

*National Center for Geographic Information and Analysis* (10/01/88-09/30/93): D. Simonett, M. Goodchild, T. Smith, and W. Tobler **\$5,500,000** (NSF).

*A Comparative Analysis of the Application of Genetic Algorithms for Calibrating Artificial Neural Systems* (08/01/88-12/01/89): T. Smith MICRO **\$68,250** (MICRO UC/ESL).

*A Spatial Data Base for Improved Query Response* (06/01/89-10/30/89): T. Smith **\$20,000** (USGS).

*Symposium on Very Large Spatial Databases* (01/01/89-07/22/89): T. Smith **\$4,000** (ORNL).

*Symposium on Very Large Spatial Databases* (01/01/89-07/31/89): T. Smith **\$10,000** (USGS).

*Design and Implementation of an Object-oriented Data Model for Very Large Spatial Databases* (07/01/89-09/30/90): T. Smith **\$15,000** (LLNL).

*IBM Joint Study Agreement* (6/10/89-10/30/92): D. Simonett, M. Goodchild, T. Smith **\$1,036,000** (IBM).

*Remote Sensing Information Science Research* (05/01/89-04/30/90): J. Estes, T. Smith, and J. Star **\$149,992** (NASA).

*Remote Sensing Information Science Research* (05/01/90-04/30/91): J. Estes, T. Smith, and J. Star **\$149,992** (NASA).

*Design and Implementation of an Object-oriented Data Model for Very Large Spatial Databases* (07/01/90-09/30/91): T. Smith **\$15,000** (LLNL).

*Towards a System that Supports Conceptual Modelling in DISI* (09/15/91-08/31/94): T. Smith, D. Agrawal, A. El Abbadi, J. Dozier **\$616,000** (NSF).

*Spatio-Temporal Data Model and High-Level Language* (09/01/91-08/31/95): T. Smith **\$66,000** (NASA).

*National Center for Geographic Information and Analysis* (10/01/93-09/30/96): M. Goodchild, H. Couclelis, J. Estes, T. Smith, W. Tobler **\$3,300,000** (NSF).

*Implementing and Applying a Modeling and Database System in Support of EOS-Scale Earth Science* (05/01/94-04/30/97): T. Smith, D. Agrawal, A. El Abbadi, O. Egecioglu, O. Ibarra, J. Melack, J. Su, and Y. Wang **\$992,215** (NASA).

*Alexandria Digital Library: Towards a Digital Library for Spatially-indexed Information* (09/15/95-08/31/98): T. Smith, M. Goodchild et. al. **\$4,000,000** (NSF/ARPA/NASA).

*The Alexandria Project: Towards a Distributed Digital Library with Comprehensive Services for Images and Spatially-Referenced Information* (): T. Smith **\$143,100** (Central Imagery Office).

*Towards a Distributed Digital Library with Comprehensive Services for Images and Spatially-Referenced Information* (): T. Smith **\$47,700** (US Navy, Stennis Space Center).

*Digital Libraries as ECS Value-Added Providers* (): T. Smith, J. Frew **\$99,195** (Hughes Corporation).

*Equipment Allowance Agreement* (): T. Smith **\$338,438** (Digital Equipment Corporation).

*Towards the Construction of Terabyte Databases* (): T. Smith **\$62,876** (Microsoft Corporation).

*The Alexandria Project: Towards a Distributed Digital Library with Comprehensive Services for Images and Spatially-Referenced Information* (): T. Smith **\$48,800** (NASA/Goddard Space Flight Center).

*Mojave Desert Project* (): T. Smith **\$50,000** (Utah State University).

*National Partnership for Advanced Computational Infrastructure*, (10/01/97-09/30/98): T. Smith **\$250,000** (NSF/San Diego Supercomputer Center subagreement).

*A New Generic Indexing Technology for Digital Library Support* (): T. Smith, M. Freeston **\$273,538** (NSF).

*Gift to support Alexandria Digital Library Project* (): T. Smith **\$23,750** (US Navy).

*Supplement to the Alexandria Digital Library Project* (): T. Smith **\$28,041** (NSF).

*Supplement to the Alexandria Digital Library Project* (): T. Smith, H.C. Chen. **\$111,847,000** Supplement (NSF).

*Project Varenus*, (): M.F.Goodchild et.al. **\$2.3M** (NSF).

*Human Dimensions of Knowledge Networking: A Workshop* T. Smith **\$60,000** (NSF).

*Alexandria Digital Library* (): T. Smith **\$** (Oracle Corporation).

*The Alexandria Project: Towards a Distributed Digital Library with Comprehensive Services for Images and Spatially-Referenced Information* NASA/Goddard 01/01/97-12/31/97 **\$48,800** .

*National Partnership for Advanced Computational Infrastructure*, (10/01/98-09/30/99): T. Smith **\$315,000** (NSF/San Diego Supercomputer Center subagreement).

*National Partnership for Advanced Computational Infrastructure Supplement for Equipment* NSF/SDSC 10/1/98-9/30/99 **\$65,000**.

*ADL '98 Funds /ADL'98 Conference Support* NASA 1/01/98 - 4/31/98 **\$20,000**.

*Digital Library Test Suite* CNRI 09/01/98-8/31/01 **\$300,000**.

*GeoWorlds Project* DARPA(USC) 06/01/98-10/31/98 **\$144,000**.

*Alexandria Digital Earth Prototype* NSF/DARPA/NASA 04/30/99-04/30/04 **\$5,400,000**.

*Alexandria Digital Earth Prototype* (Supplement) NSF/DARPA/NASA 04/30/99-04/30/00 **\$52,000**.

*Towards a Qualitative Theory of Non-linear Geographic Systems: Regular and Stochastic Evolution in Fluvial Landforms* NSF 13/19/99-03/18/02 T.Smith, B. Birnir. **\$278,524**.

*National Park Service Geospatial Data Clearinghouse for the Blue Ridge Parkway* NPS 10/01/97-09/30/98 **\$10,000**.

*Collaborative Research In Digital Libraries, Digital Government and Smart Choices* U. of Aberdeen 09/01/98-08/31/99 **\$39,567**.

*ESDIS Prototyping Program* NASA 08/01/98-06/30/99 **\$99,795**.

*Digital Library Test Suite* 09/01/98-8/31/01 T.Smith **\$300,000** (CNRI) .

*Alexandria Digital Library project* UCSD/NSF (NPACI) 10/01/97-09/30/ 03 **\$500,000** .

*Alexandria Digital Earth Prototype* 04/30/99-04/30/04 T.Smith et. al. **\$5,254,000** (NSF) .

*Alexandria Digital Earth Prototype* (Supplement) NSF/DARPA/NASA 04/30/99-04/30/00 **\$52,000** (NSF) .

*Towards a Qualitative Theory of Non-linear Geographic Systems: Regular and Stochastic Evolution in Fluvial Landforms* 13/19/99-03/18/02 T.Smith, B. Birnir. **\$278,524** (NSF) .

*Textual-Geospatial Integration Services for NSDL* 10/01/01-09/30/03 J.Frew, T.Smith **\$449,265** (NSF-DUE) .

*National Science Digital Library Integration Services* 01/01/00-09/29/02 T.Smith **\$89,848** NSF via UCAR.

*Collaborative Project: Core Integration on the NSDL* 10/01/01-09/30/03 T.Smith/J.Frew/G.Janee **\$489,972**.

*Strand Maps as an Interactive Interface to NSDL Resources* 01/01/03-12/31/04 T.Smith/G.Janee **\$20,000** (NSF via Univ Colorado) .

*digital Libraries Supporting Innovative Approaches to Learning and Teaching in Geography* 02/01/03/01/31/06 M.Freeston/T.Smith/K.Clarke **\$939,853** (NSF) .

*The DLESE Program Center: Providing Infrastructure for a Distributed Community Library* 01/01/03-09/30/05 T.Smith **\$125,000** (NSF via UCAR) .

*Collaborative Project: Core Integration - Leading NSDL Toward Long-Term Success* 10/01/02-09/30/06 T.Smith/J.Frew/G.Janee **\$1,481,064** (NSF via UCAR) .

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Since last review

*Strand Maps as an Interactive Interface to NSDL Resources* 01/01/03-12/31/04 T.Smith/G.Janee **\$20,000**

(NSF via Univ Colorado) .

*digital Libraries Supporting Innovative Approaches to Learning and Teaching in Geography* 02/01/03/01/31/06  
M.Freeston/T.Smith/K.Clarke **\$939,853** (NSF) .

*The DLESE Program Center: Providing Infrastructure for a Distributed Community Library* 01/01/03-09/30/05 T.Smith **\$125,000** (NSF via UCAR) .

*Collaborative Project: Core Integration - Leading NSDL Toward Long-Term Success* 10/01/02-09/30/06  
T.Smith/J.Frew/G.Janee **\$1,481,064** (NSF via UCAR) .

## Reviewing and Refereeing

*Water Resources Research*

*Transportation Research*

*Geographical Analysis*

*National Science Foundation*

*Environment and Planning*

*Economic Geography*

*Department of Housing and Urban Development*

*Urban Geography*

National Science Foundation

*Annals of the Association of American Geographers*

*Professional Geographer*

*Micro Program*

*International Journal of Geographic Information Systems*

NASA

*Image and Vision Computing*

*American Society for Photogrammetry and Remote Sensing*

*Linear and Multilinear Algebra*

*Journal of Very Large Databases*

National Research Council/National Academy of Sciences

*Computers and Geoscience*

## Memberships in Professional Societies

### PART IV. UNIVERSITY SERVICE

Years	Position	Type of Service
1976-	Member	of panels to select students for Education Abroad
1977-81	Undergraduate Advisor	Department of Geography
1977-80	Secretary	Academic Senate (S.B.)
1977-80	Chairman	Election Committee
1978	Member	Committee to evaluate CORI
1978	Member	Committee to evaluate Environmental Studies Program
1978-79	Acting Associate Director	CORI
1978	Participant	summer Orientation Program
1979-83	Member	Research Committee
1981-94	Associate Director	CORI
1981-86	Graduate Advisor	Department of Geography
1981-82	Member	Space Committee
1982	Member	Committee to Evaluate Computer Science Lab
1982-83	Chairman	Research Committee
1984-86	Member	Committee on Committees
1984-89	Co-Director	Center for the Study of Spatial Cognition and Performance
1984-present	Co-Director	Remote Sensing Unit
1985-86	Graduate Advisor	Computer Science Department
1985-86	Acting Director	CORI
1986-90	Chairman	Department of Computer Science
1986	Member	Committee to select Dean of Education
1986-90	Member	College of Engineering Executive Committee
1989-90	Chair	Executive Committee, College of Engineering
1987-90	Member	Cognitive Science Program Committee
1987-89	Member	Graduate Committee, College of Engineering
1987-90	Member	Executive Committee, Center for Computational Sciences and Engineering
1988-91	Associate Director	National Center for Geographic Information and Analysis
1987-89	Member	Committee on Program in Scientific Computation, College of Engineering
1988-91	Member	Faculty Legislature
1989-present	Member	Neuroscience Research Institute Advisory Committee
1990-91	Member	Committee to select Dean of the College of Engineering
1990-91	Member	Graduate Council
1991	Chairman	Five Year Review Committee to Review CORI
1991-present	Member	CORI Advisory Committee
1993-95	Member	Committee on Committees
1993-present	Member	Academic Development Committee for School of Environmental Science and Management
1993-94	Member	Search Committee for Dean for Graduate School of Education
1994-present	Director	Center for Computational Modeling and Systems, College of Engineering
1994-present	Director	Alexandria Digital Library.
1996-97	Member	Emergency Review Committee.
1996-98	Member	University of California Library Planning Advisory Task Force.
1996-97	Member	ESM faculty selection committee.
1996-97	Chair	Ad Hoc Committee to Plan UCSB Program/School in the Information Disciplines.

Years	Position	Type of Service
1997-98	Member	Committee on Capital Projects (SCAPE)
1998-1999	Member	Committee on Research
1998	Member	Librarian Search Committee
1999-2000	Member	Committee on Research
2001	Member	Search Advisory Committee, Associate University Librarian
2000-2002	Member	Library Committee
2002-2003	Member	Library Planning Committee
2002	Member	Selection Committee for Director of ICES
2002-present	Member	ICES Executive Committee
2003-2003	Member	Executive Committee, College of Engineering
2002-2003	Chair	Research Committee
2002-2003	Vice-Chair	Council on Research and Instructional Resources
2003	Member	Committee to review architects for Davidson Library

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