



MICHAEL FRANK GOODCHILD

Professor Emeritus of Geography
Research Professor

University of California, Santa
Barbara

Affiliate Professor of Geography
University of Washington

Distinguished Chair Professor
Hong Kong Polytechnic
University

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Personal Data	Education
Professional Experience	Scholarships, Awards, etc.
Publications	Conferences and Symposia Organized
Reviews	Papers Read
Short Courses Given by Invitation	Research Grants and Contracts
Consultantships, etc.	Theses Supervised (as Principal Advisor)

Personal Data [\[Top\]](#)

Marital Status: Married, three daughters, four grandsons, three granddaughters, one great granddaughter

Nationality: British Citizen, US Citizen

Home Address: 3334 NE Blakeley St, Seattle, WA 98105

Education [\[Top\]](#)

Professional Experience [\[Top\]](#)

Research Professor, School of Geographic Science and Urban Planning, Arizona State University, 2017–

Adjunct Professor of Geography, University of Western Ontario, 2017–

Distinguished Chair Professor, Hong Kong Polytechnic University, 2016–

Adjunct Professor, RMIT University, 2016–

Adjunct Professor of Geography, Simon Fraser University, 2014–

Affiliate Professor of Geography, University of Washington, 2012–

Emeritus Professor of Geography, University of California, Santa Barbara, 2012–

Research Professor, University of California, Santa Barbara, 2012–2016

Jack and Laura Dangermond Chair of Geography, University of California, Santa Barbara, 2010–2012

Director, Center for Spatial Studies (spatial@ucsb), University of California, Santa Barbara, 2007–2012

Editor for Methods, Models, and Geographic Information Sciences, *Annals of the Association of American Geographers*, 2000–2006

Director, Center for Spatially Integrated Social Science, University of California, Santa Barbara, 1999–2012

Chair, Department of Geography, University of California, Santa Barbara, 1998–2000

Director, The Varenus Project, 1997–2001

Visiting Professor, Birkbeck College, University of London, 1997

Chair, Mapping Science Committee, National Research Council, 1997–1999

Associate Director, Alexandria Digital Library, 1994–2012

Chair, Executive Committee, National Center for Geographic Information and Analysis, 1997–2012

Director, National Center for Geographic Information and Analysis, 1991–1996

Honorary Professor, University of Western Ontario, 1989–94

Professor, University of California, Santa Barbara, 1989–2012

Co-Director, National Center for Geographic Information and Analysis, 1988–91

Visiting Professor, University of California, Santa Barbara, 1978, 1979, 1988–89

Editor, *Geographical Analysis*, 1987–90

Visiting Professor, University of Auckland, June 1986

Visiting Scholar, CSIRO, Canberra, January-May, 1986

Chairman, Department of Geography, University of Western Ontario, 1982–85

Professor, University of Western Ontario, 1979–1989

Associate Professor, University of Western Ontario, 1971–79

Research Associate, University of Iowa, June 1974

Visiting Associate Professor, University of Iowa, January-May 1974

Co-ordinator of Graduate Studies, University of Western Ontario, Department of Geography, 1973, 1981–82

Visiting Professor, University of Iowa, July 1973, as Instructor, NSF Institute, "The Instructional Use of Computerized Algorithms for Solving Location Problems"

Visiting Professor, McGill University, August 1972

Assistant Professor, University of Western Ontario, 1969–71

Scholarships, Awards, etc. [\[Top\]](#)

Distinguished Lecturer, Texas A&M University, 2024–2027

Guest Professor, Peking University, 2019–2021

Hall of Fame, Geospatial World Forum, Hyderabad, 2017

Fellow, International Society for Digital Earth, 2016–

Stanley Brunn Award for Creativity in Geography, 2016

Honorary Doctorate, University of Western Ontario, 2015

Fellow, Royal Geographical Society, 2015–

Fellow, Royal Canadian Geographical Society, 2013–

"Reflections on Geographic Information Science: special issue in honor of Michael Goodchild". Guest editors Nina Siu-Ngan Lam and Karen Kemp. *International Journal of Geographical Information Science* 26 (11–12), 2012.

CODATA Prize, 2012 (given by the Committee on Data for Science and Technology of the International Council for Science)

Peter A. Burrough Medal, International Spatial Accuracy Research Association, 2012

Fellow, University Consortium for Geographic Information Science, 2010–

Corresponding Fellow, the British Academy, 2010–

Foreign Member, the Royal Society, 2010–

UCGIS Research Award, 2010, University Consortium for Geographic Information Science

Honorary Professor, Capital Normal University, Beijing, 2009–

Honorary Professor, Chinese University of Mining and Technology, Xuzhou, 2009–

Digital Earth Prize for Scientific Contributions, International Society for Digital Earth, 2009

Honorary Director, Academic Committee, Jiangsu Key Laboratory of Resources and Environmental Information Engineering, Chinese University of Mining and Technology, Xuzhou, 2009–

Visiting Professor, Sichuan University, Chengdu, 2008–

Honorary Professor, Tongji University, Shanghai, 2008–

Sigma Xi Distinguished Lecturer, 2009–2011

Prix Vautrin Lud, St Dié-des-Vosges, France, 2007

Inducted into the GIS Hall of Fame, Urban and Regional Information Systems Association, 2007

Lifetime Achievement Award, Geospatial Information and Technology Association, 2007

Robert T. Aangeenbrug Distinguished Career Award, Geographic Information Science and Systems Specialty Group, Association of American Geographers, 2006

Member, American Academy of Arts and Sciences, 2006–

Ernest Walton Fellowship, Science Foundation Ireland, 2005–2006

Honorary Doctor of Laws, Ryerson University, 2004

Honorary Doctor of Science, McMaster University, 2004

Honorary Professor, Wuhan University, 2003–

Faculty Research Lecturer, University of California, Santa Barbara, 2003

Founder's Medal, Royal Geographical Society, 2003

Educator of the Year, University Consortium for Geographic Information Science, 2002

Foreign Fellow, Royal Society of Canada, 2002–

Member, National Academy of Sciences, 2002–

National Associate of the National Academies, 2001–

Lifetime Achievement Award, Environmental Systems Research Institute, 2001

Honorary Doctor of Science, Keele University, 2001

Award of Distinction for Exceptional Scholarly Contributions to Cartography, Canadian Cartographic Association, 1999

Honorary Doctor of Science, Laval University, 1999

Intergraph Award, ASPRS, 1996 (with G.J. Hunter)

AAG Award for Distinguished Scholarship, 1996

Horwood Critique Prize, URISA, 1995 (with G.J. Hunter)

Gerald McCalden Award, AURISA, 1994 (with G.J. Hunter and M. Robey)

Horwood Critique Prize, URISA, 1993 (with G.J. Hunter)

1990 Award for Scholarly Distinction, Canadian Association of Geographers

NSERC Travel Grant, 1986

SSHRC Leave Fellowship, 1986

AAG Applied Geography Citation Award, 1983

NRC Scholarship, 1967–69

NRC Bursary, 1966

Open Scholar, Downing College, Cambridge, 1962–65

State Scholar, 1962–65

Open Scholar, Taunton School, Somerset, 1955–61

Publications [\[Top\]](#)

A.E. Frazier, T. Nelson, P. Kedron, E. Shook, S. Dodge, A. Murray, M.F. Goodchild, S. Battersby, J.I. Blanford, C. Claramunt, J. Holler, C. Koylu, A. Lee, S. Manson, S. Salap-Ayça, J.P. Wilson, B. Zhao, L. Bennett, C. Cabrera, R. Franklin, G. McKenzie, H. Miller, T. Oshan, S. Rey, F. Rowe, S. Spielman, and W. Xu (2025) [Rethinking GIScience education in an age of disruptions](#). *Transactions in GIS* 29(2): e70048. DOI: 10.1111/tgis.70048 [606]

X. Ye, T. Yigitcanlar, M.F. Goodchild, X. Huang, W. Li, S. Shaw, Y. Fu, W. Gong, and G. Newman (2025). [Artificial Intelligence in urban science: Why does it matter?](#) *Annals of GIS*. DOI: 10.1080/19475683.2025.2469110 [605]

M.F. Goodchild, G.M. Langham, R. Appelbaum, J. Crampton, W.A. Herbert, K. Janowicz, M.P. Kwan, K. Michael, and L. Schamess (2025) [Locational data and the public interest](#). *IEEE Transactions on Technology and Society* 6(2): 129–154. DOI: 10.1109/TTS.2025.3527897 [604]

S.L. Shaw, X.Y. Ye, M.F. Goodchild, and D. Sui (2024) [Human dynamics research in GIScience: challenges and opportunities](#). *Computational Urban Science* 4. DOI: 10.1007/s43762-024-00144-y [603]

Y.J. Hu, M.F. Goodchild, A.X. Zhu, M. Yuan, O. Aydin, B. Bhaduri, S. Gao, W.W. Li, D. Lunga, and S. Newsam (2024) [A five-year milestone: reflections on advances and limitations in GeoAI research](#). *Annals of GIS* 30(1): 1–14. DOI: 10.1080/19475683.2024.2309866 [602]

M.F. Goodchild (2024) [Foreword](#). In S. Gao, Y. Hu, and W. Li, editors, *Handbook of Geospatial Artificial Intelligence*, pp xi–xii. Boca Raton, FL: CRC Press. [601]

M.F. Goodchild (2023) [The roots of GIS](#). In A.J. Kent and D. Specht, editors, *The Routledge Handbook of Geospatial Technologies and Society*, pp. 42–49. New York: Routledge. [600]

- M.F. Goodchild (2022) [Reproducibility and replicability in spatial science](#). In S.J. Rey and R.S. Franklin, editors, *Handbook of Spatial Analysis in the Social Sciences*, pp. 518–527. Northampton, MA: Edward Elgar. [599]
- M.F. Goodchild (2022) [COVID and the science of where](#). In S.D. Brunn and D. Gilbreath, editors, *COVID-19 and a World of Ad Hoc Geographies*, pp. 29–42. Cham, Switzerland: Springer. [598]
- M.F. Goodchild, W.W. Li, and D.Q. Tong (2022) [Introduction to the special issue on scale and spatial analytics](#). *Journal of Geographical Systems*. DOI: 10.1007/s10109-022-00391-9. [597]
- M.F. Goodchild (2022) [Editorial: The Openshaw Effect](#). *International Journal of Geographical Information Science* 36(9): 1697–1698. DOI: 10.1080/13658816.2022.2102637. [596]
- M.F. Goodchild (2022) [Geography and the information society](#). In V. Kolosov, J. Garcia-Alvarez, M. Heffernan, and B. Schelhaas, editors, *A Geographical Century: Essays for the Centennial of the International Geographical Union*, pp. 225–234. Cham, Switzerland: Springer. [595]
- T.A. Nelson, M.F. Goodchild, and D.J. Wright (2022) [Accelerating ethics, empathy, and equity in geographic information science](#). *Proceedings of the National Academy of Sciences* 119(19): e2119967119. DOI: 10.1073/pnas.2119967119. [594]
- M.F. Goodchild (2022) [Commentary: General principles and analytical frameworks in geography and GIScience](#). *Annals of GIS* 28(1): 85–87. DOI: 10.1080/19475683.2022.2030943. [593]
- M.F. Goodchild and W.W. Li (2021) [Replication across space and time must be weak in the social and environmental sciences](#). *Proceedings of the National Academy of Sciences*. DOI: 10.1073/pnas.2015759118. [592]
- M.F. Goodchild (2021) [Deep in the karst: foundations for a career in geography](#). *Geographical Bulletin* 62(1). [591]
- M.F. Goodchild (2021) [A final word: the value of urban informatics](#). In W.Z. Shi, M.F. Goodchild, M. Batty, M.P. Kwan, and A. Zhang, editors, *Urban Informatics*, pp. 935–941. Singapore: Springer. [590]
- M.F. Goodchild (2021) [Introduction to urban big data infrastructure](#). In W.Z. Shi, M.F. Goodchild, M. Batty, M.P. Kwan, and A. Zhang, editors, *Urban Informatics*, pp. 543–546. Singapore: Springer. [589]
- W.Z. Shi, M.F. Goodchild, M. Batty, M.P. Kwan, and A. Zhang (2021) [General introduction](#). In W.Z. Shi, M.F. Goodchild, M. Batty, M.P. Kwan, and A. Zhang, editors, *Urban Informatics*, pp. 1–10. Singapore: Springer. [588]
- W.Z. Shi, M.F. Goodchild, M. Batty, M.P. Kwan, and A. Zhang, editors (2021) [Urban Informatics](#). Singapore: Springer. [587]
- M.F. Goodchild (2021) [Geoethics in the geospatial community](#). *ArcNews* (summer). [586]
- M.F. Goodchild (2020) [Beyond Tobler’s hiking function](#). *Geographical Analysis* 52(4): 558–569. DOI: 10.1111/gean.12253. [585]
- M.F. Goodchild, A.S. Fotheringham, P. Kedron, and W.W. Li (2020) [Introduction: Forum on reproducibility and replicability in geography](#). *Annals of the American Association of Geographers* 111(5): 1271–1274. DOI: 10.1080/24694452.2020.1806030. [584]

P. Kedron, W.W. Li, A.S. Fotheringham, and M.F. Goodchild (2020) [Reproducibility and replicability: Opportunities and challenges for geospatial research](#). *International Journal of Geographical Information Science*. DOI: 10.1080/13658816.2020.1802032. [583]

W.W. Li, M. Batty, and M.F. Goodchild (2020) [Real-time GIS for smart cities](#). *International Journal of Geographical Information Science* 34(2): 311–324. DOI: 10.1080/13658816.2019.1673397. [582]

J. Dangermond and M.F. Goodchild (2019) [Building geospatial infrastructure](#). *Geo-spatial Information Science* 23(1): 1–9. DOI: 10.1080/10095020.2019.1698274. [581]

M.F. Goodchild (2020) [Mapping language in the age of GIS](#). In S.D. Brunn and R. Kehrein, editors, *Handbook of the Changing World Language Map*. Springer. [580]

H. Guo, M.F. Goodchild, and A. Annoni, editors (2020) [Manual of Digital Earth](#). Springer Open. DOI: 10.1007/978-981-32-9915-3 [579]

M.F. Goodchild (2019) [Geography and GIScience: an evolving relationship](#). *Canadian Geographer*. DOI: 10.1111/cag.12554 [578]

M.F. Goodchild and P.A. Longley (2019) [Geographic information science](#). In M. Fischer, editor, *Handbook of Regional Science*. DOI: 10.1007/978-3-642-36203-3_61-1 [577]

M.F. Goodchild (2019) [Preface: Special Issue on Discrete Global Grid Systems](#). *Cartographica* 54(1): 1–3. [576]

S. Wang and M.F. Goodchild, editors (2018) [CyberGIS for Geospatial Discovery and Innovation](#). Dordrecht: Springer. DOI: 10.1007/978-94-024-1531-5. [575]

S. Wang and M.F. Goodchild (2018) [CyberGIS for transforming geospatial discovery and innovation](#). In S. Wang and M.F. Goodchild, editors, *CyberGIS for Geospatial Discovery and Innovation*, pp. 3–10. Dordrecht: Springer. DOI: 10.1007/978-94-024-1531-5. [574]

D.G. Janelle and M.F. Goodchild (2018) [Territory, geographic information, and the map](#). In S. Wuppuluri and F.A. Doria, editors, *The Map and the Territory: Exploring the Foundations of Science, Thought and Reality*, pp. 609–628. Springer. [572]

M.F. Goodchild (2018) [GIScience for a driverless age](#). *International Journal of Geographical Information Science* 32(5) 849–855. DOI: 10.1080/13658816.2018.1440397 [571]

M.F. Goodchild (2018) [Reimagining the history of GIS](#). *Annals of GIS* 24(1): 1–8. DOI: 10.1080/19475683.2018.1424737. [570]

M.F. Goodchild (2018) [A GIScience perspective on the uncertainty of context](#). *Annals of the American Association of Geographers* 108(6): 1476–1481. <https://doi.org/10.1080/24694452.2017.1416281> [569]

M.F. Goodchild (2018) Big geodata. In B. Huang, editor, [Comprehensive Geographic Information Systems](#). Vol. 1, pp. 19–25. Oxford: Elsevier. <http://dx.doi.org/10.1016/B978-0-12-409548-9.09595-6> [568]

L. Li and M.F. Goodchild (2017) [Spatiotemporal footprints in social networks](#). In R. Alhajj and J. Rokne, editors, *Encyclopedia of Social Network Analysis and Mining*. Springer. DOI: 10.1007/978-1-4614-7613-9_322-1. [567]

M.F. Goodchild (2016) [Gerard Rushton and quantitative human geography](#). In A. Phipps, editor, *Research Advances in Behavioral, Economic and Health Geography Inspired by Gerard Rushton*. Windsor, Ontario: University of Windsor. [566]

M.F. Goodchild, C. Aubrecht, and B. Bhaduri (2016) [New questions and a changing focus in advanced VGI research](#). *Transactions in GIS*. DOI: 10.1111/tgis.12242 [565]

M.F. Goodchild (2016) [Gazetteers present: spatial science and volunteered geographical information](#). In M.L. Berman, R. Mostern, and H. Southall, editors, *Placing Names: Enriching and Integrating Gazetteers*, pp. 26–34. Bloomington, IN: Indiana University Press. [564]

G. McKenzie, M. Hegarty, T. Barrett, and M.F. Goodchild (2015) [Assessing the effectiveness of different visualizations for judgments of positional uncertainty](#). *International Journal of Geographical Information Science*. DOI 13658816.2015.1082566 [563]

W. Li and M.F. Goodchild (2015) [An optimization technique for addressing DEM misregistration in hilly terrain](#). *Annals of GIS*. DOI 10.1080/19475683.2015.1085438 [562]

M.F. Goodchild (2015) [Perspectives on the new cartography](#). *Environment and Planning A* 47: 1341–1345. doi:10.1177/0308518X15594911 [561]

M.F. Goodchild (2015) [Space, place and health](#). *Annals of GIS*. DOI: 10.1080/19475683.2015.1007895 [560]

M.F. Goodchild and Peng Gong (2014) [Perspectives on space and time in US and Chinese science](#). In M.P. Kwan, D. Richardson, D. Wang, and C. Zhou, editors, *Space-Time Integration in Geography and GIScience*, pp. 7–20. New York: Springer. [559]

H.J. Miller and M.F. Goodchild (2014) [Data-driven geography](#). *GeoJournal* 80(4) : 449–461. DOI: 10.1007/s10708-014-9602-6. [558]

M.F. Goodchild, D.G. Janelle, and K. Grossner (2014) [Critical spatial thinking](#). In R.J. Stimson, editor, *Handbook of Research Methods and Applications in Spatially Integrated Social Science*, pp. 26–42. Cheltenham: Edward Elgar. [557]

L. Yu, L. Liang, J. Wang, Y. Zhao, Q. Cheng, L. Hua, S. Liu, L. Yu, X. Wang, P. Zhu, X. Li, Y. Xu, C. Li, W. Fu, X. Li, W. Li, C. Liu, N. Cong, H. Zhang, F. Sun, X. Bi, Q. Xin, D. Li, D. Yang, Z. Zhu, M.F. Goodchild, and P. Gong (2014) [Meta-discoveries from a synthesis of satellite-based land-cover mapping research](#). *International Journal of Remote Sensing* 35(13): 4573–4588. DOI: 10.1080/01431161.2014.930206 [556]

J.-X. Zhang, P.M. Atkinson, and M.F. Goodchild (2014) [Scale in Spatial Information and Analysis](#). Boca Raton: CRC Press. [555]

M.F. Goodchild (2013) [The quality of big\(geo\)data](#). *Dialogs in Human Geography* 3: 280–284. DOI: 10.1177/2043820613513392 [554]

W. Li, R.L. Church, and M.F. Goodchild (2013) [An extendable heuristic framework to solve the p-compact-regions problem for urban economic modeling](#). *Computers, Environment and Urban Systems* 43: 1–13. DOI: 10.1016/j.compenvurbsys.2013.10.002 [553]

M.F. Goodchild (2013) [Prospects for a space–time GIS](#). *Annals of the Association of American Geographers* 103(5): 1072–1077. [552]

- M.F. Goodchild and P.A. Longley (2013) [Geocomputation and GIScience](#). In M.M. Fischer and P. Nijkamp, editors, *Handbook of Regional Science*. Dordrecht: Springer. [551]
- W. Li, L. Li, M.F. Goodchild, and L. Anselin (2013) [A geospatial cyberinfrastructure for urban economic analysis and spatial decision-making](#). *ISPRS International Journal of Geo-Information* 2: 413–431. DOI: 10.3390/ijgi2020413. [549]
- X.-H.Tong, T. Sun, J.-Y. Fan, M.F. Goodchild, and W.-Z. Shi (2013) [A statistical simulation model for positional error of line features in geographic information systems](#). *International Journal of Applied Earth Observation and Geoinformation* 21: 136–148. [548]
- L. Li, M.F. Goodchild, and B. Xu (2013) [Spatial, temporal, and socioeconomic patterns in the use of Twitter and Flickr](#). *Cartography and Geographic Information Science* 40(2): 61–77.. DOI: 10.1080/15230406.2013.777139. [547]
- S. Wang, L. Anselin, B. Bhaduri, C. Crosby, M.F. Goodchild, Y. Liu, and T.L. Nyerges (2013) [CyberGIS software: a synthetic review and integration roadmap](#). *International Journal of Geographical Information Science* 27(11): 2122–2145. DOI: 10.1080/13658816.2013.776049. [546]
- D.R. Richardson, N.D. Volkow, M.-P. Kwan, R.M. Kaplan, M.F. Goodchild, and R.T. Croyle (2013) [Spatial turn in health research](#). *Science* 339(6): 1390–1392. DOI: 10.1126/science.1232257. [545]
- M.F. Goodchild and L. Li (2012) [Formalizing space and place](#). In P. Beckouche, C. Grasland, F. Guérin-Pace, and J.-Y. Moissoner, editors, *Fonder les Sciences du Territoire*, pp. 83–94. Paris: Éditions Karthala. [544]
- S.L. Cutter, J.A. Ahearn, B. Amadei, P. Crawford, E.A. Eide, G.E. Galloway, M.F. Goodchild, H.C. Kunreuther, M. Li-Vollmer, M. Schoch-Spana, S.C. Scrimshaw, E.M. Stanley, G. Whitney, and M.L. Zoback (2013) [Disaster resilience: a national imperative](#). *Environment: Science and Policy for Sustainable Development* 55(2): 25–29. [543]
- M.F. Goodchild (2012) GIScience in the 21st century. In W. Shi, M.F. Goodchild, B. Lees, and Y. Leung, editors, *Advances in Geo-Spatial Information Science*, pp. 3–10. Leiden: CRC Press. [542]
- W. Shi, M.F. Goodchild, B. Lees, and Y. Leung, editors (2012) [Advances in Geo-Spatial Information Science](#). Leiden: CRC Press. [541]
- W. Li, M.F. Goodchild, and R.L. Church (2013) [An efficient measure of compactness for two-dimensional shapes and its application in regionalization problems](#). *International Journal of Geographical Information Science* 27(6): 1227–1250. DOI: 10.1080/13658816.2012.752093. [540]
- G. Cao, P.C. Kyriakidis, and M.F. Goodchild (2012) [Response to "Comments on 'Combining spatial transition probabilities for stochastic simulation of categorical fields' with communications on some issues related to Markov chain geostatistics"](#). *International Journal of Geographical Information Science* 26(9–10): 1741–1750. [539]
- M.F. Goodchild (2012) [NCGIA: its origins and impacts](#). In B. Wellar, editor, *Foundations of Urban and Regional Information Systems and Geographic Information Systems and Science*, pp. 195–202. Washington, DC: URISA. [538]
- N. Li, S. Ervin, M. Flaxman, M.F. Goodchild, and C. Steinitz (2012) [Design and application of an ontology for Geodesign](#). *Revue Internationale de Géomatique* 22(2): 145–168. [537]
- S. Roche and M.F. Goodchild (2012) [Introduction: Geodesign: theory and practice](#). *Revue Internationale de Géomatique* 22(2): 141–143. [536]

- M.F. Goodchild (2012) Afterword. In F. Harvey, editor, *Are There Fundamental Principles in GIScience?* pp. 88–93. Seattle: CreateSpace. [535]
- D.Z. Sui, S. Elwood, and M.F. Goodchild, editors (2012) [Crowdsourcing Geographic Knowledge: Volunteered Geographic Information \(VGI\) in Theory and Practice](#). New York: Springer. [534]
- D.Z. Sui, M.F. Goodchild, and S. Elwood (2012) [Introduction: volunteered geographic information, the exaflood, and the growing digital divide](#). In D.Z. Sui, S. Elwood, and M.F. Goodchild, editors, *Crowdsourcing Geographic Knowledge: Volunteered Geographic Information (VGI) in Theory and Practice*, pp. 1–14. New York: Springer. [533]
- M.F. Goodchild (2012) Foreword. In A. Mitchell, [The Esri Guide to GIS Analysis Volume 3: Modeling Suitability, Movement, and Interaction](#). Redlands, CA: Esri Press. [532]
- N. Li, R. Raskin, M.F. Goodchild, and K. Janowicz (2012) [An ontology-driven framework and Web portal for spatial decision support](#). *Transactions in GIS* 16(3): 313–330. [531]
- M.F. Goodchild, H. Guo, A. Annoni, L. Bian, K. de Bie, F. Campbell, M. Craglia, M. Ehlers, J. van Genderen, D. Jackson, A.J. Lewis, M. Pesaresi, G. Remetey-Fülöpp, R. Simpson, A. Skidmore, C. Wang, and P. Woodgate (2012) [Next-generation Digital Earth](#). *Proceedings of the National Academy of Sciences* 109(28): 11088–11094. [530]
- G. Cao, P.C. Kyriakidis, and M.F. Goodchild (2011) [A multinomial logistic mixed model for the prediction of categorical spatial data](#). *International Journal of Geographical Information Science* 25(12): 2071–2086. [529]
- M.F. Goodchild (2012) [Geographic information systems](#). In A. Hastings and L.J. Gross, editors, *Encyclopedia of Theoretical Ecology*, pp. 341–345. Berkeley, CA: University of California Press [528]
- S. Elwood, M.F. Goodchild, and D.Z. Sui (2012) [Researching volunteered geographic information: spatial data, geographic research, and new social practice](#). *Annals of the Association of American Geographers* 102(3): 571–590. [527]
- M.F. Goodchild and L. Li (2012) [Assuring the quality of volunteered geographic information](#). *Spatial Statistics* 1: 110–120. DOI: 10.1016/j.spasta.2012.03.002 [526]
- W. Li, M.F. Goodchild, and R. Raskin (2012) [Towards geospatial semantic search: exploiting latent semantic relations in geospatial data](#). *International Journal of Digital Earth*, DOI:10.1080/17538947.2012.674561 [525]
- M.F. Goodchild (2012) [The future of Digital Earth](#). *Annals of GIS* 18(2): 93–98. DOI: 10.1080/19475683.2012.668561 [524]
- W. Li, R. Raskin, and M.F. Goodchild (2012) [Semantic similarity measurement based on knowledge mining: an artificial neural net approach](#). *International Journal of Geographical Information Science* 26(7-8): 1415–1436. DOI:10.1080/13658816.2011.635595 [523]
- D. Hardy, J. Frew, and M.F. Goodchild (2012) [Volunteered geographic information production as a spatial process](#). *International Journal of Geographical Information Science* 26(7-8): 1191–1212. DOI 10.1080/13658816.2011.629618. [522]
- G. Cao, P.C. Kyriakidis, and M.F. Goodchild (2011) [Combining spatial transition probabilities for stochastic simulation of categorical fields](#). *International Journal of Geographical Information Science* 25(10–12): 1773–1792. [521]

M. Craglia, K. de Bie, D. Jackson, M. Pesaresi, G. Remetey-Fülöpp, C. Wang, A. Annoni, L. Bian, F. Campbell, M. Ehlers, J. van Genderen, M. Goodchild, H. Guo, A. Lewis, R. Simpson, A. Skidmore, and P. Woodgate (2012) [Digital Earth 2020: towards the vision for the next decade](#). *International Journal of Digital Earth* 5(1): 4–21. [520]

M.F. Goodchild (2011) [Spatial thinking and the GIS user interface](#). *Procedia Social and Behavioral Sciences* 21: 3–9. [519]

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Organizer and co-Chair, [Specialist Meeting on Spatio-Temporal Constraints on Social Networks](#), Santa Barbara, December 2010.

Organizer, [Specialist Meeting on Spatial Concepts in GIS and Design](#), Santa Barbara, December 2008.

Organizer, [International Symposium on Geographic Information Science](#), Santa Barbara, December 2008.

Organizer, [Specialist Meeting on Volunteered Geographic Information](#), Santa Barbara, December 2007.

Organizer, [Specialist Meeting on Agent-Based Modeling of Complex Spatial Systems](#), Santa Barbara, December 2007.

General Chair, International Conference on Geographic Information Science (GIScience 2004), Adelphi, MD, September 2004.

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Organizer, Specialist Meeting on Location-Based Services, Santa Barbara, December 2001.

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General Chair, International Conference on Geographic Information Science (GIScience 2000), Savannah, GA, October 2000.

Organizer, International Conference on Discrete Global Grids, Santa Barbara, March 2000.

Organizer, Data Access Thread, National Geodata Forum, Washington, DC, June 1999.

Organizer, Pre-Conference Workshops, 3rd National Conference on GIS in Public Health, San Diego, August 1998

Organizer, International Conference on Interoperating GISs, Santa Barbara, December 1997.

Organizer, Conference on Geographies of the Information Society, Santa Barbara, February 1997.

Organizer, Conference on Deploying ITS Map Database Interoperability Specifications, Santa Barbara, December 1996.

Organizer, Conference on Object Orientation and Navigable Databases, Santa Barbara, March 1996

Organizer, Second Specialist Meeting, NCGIA Research Initiative on Multiple Roles for GIS in US Global Change Research, Santa Fe, January 1996.

Organizer, Third International Conference/Workshop on Integrating GIS and Environmental Modeling, Santa Fe, January 1996.

Organizer, Workshop on Spatial Metadata, Alexandria Digital Library, Santa Barbara, November 1995.

Organizer, First Specialist Meeting, NCGIA Research Initiative on Multiple Roles for GIS in US Global Change Research, Santa Barbara, March 1995.

Organizer, Second International Conference/Workshop on Integrating GIS and Environmental Modeling, Breckenridge, CO, September 1993.

Co-organizer, First International Conference/Workshop on Integrating GIS and Environmental Modeling, Boulder, September 1991.

Organizer, Specialist Meeting, NCGIA Research Initiative on Spatial Decision Support Systems, Santa Barbara, March 1990.

Organizer, Specialist Meeting, NCGIA Research Initiative on the Accuracy of Spatial Databases, Casa De Maria, Montecito, CA, December 1988

Organizer and vice-chairman, First Meeting, IGU Global Database Planning Project, Tylney Hall, UK, May 1988

Organizer, Workshop on Geographic Information Systems, Nova Scotia Land Survey Institute, June 14-18, 1985; June 16-21, 1987

Organizer and chairman, Special Sessions on quantitative methods, CAGONT/ELDAAG, London, Ontario, November 1980

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"Rethinking History: The Legacy of Earlier Technological Constraints" Getis-Ord Lecture, Western Regional Science Association, Pasadena, February 2018.

"What Should a GSI Offer", Opening Keynote, Workshop: Geospatial Software Institute: Connecting Big Data with Geospatial Discovery and Innovation, University of Southern California, February 2018.

"Reimagining the History of GIS", SPARC Launch, Arizona State University, December 2017.

"Reflections on VGI", Opening keynote, ISPRS Summer School, Dehra Dun, India, October 2017.

"Keeping Up with GIS", NorthWest GIS Conference, Boise, October 2017.

"Rethinking the History of GIS", Chinese Professionals in GIS, University at Buffalo, August 2017.

"CyberGIS and Emergency Management", CyberGIS Summer School, University of Illinois at Urbana-Champaign, May 2017.

"Uncertainty and Context in Geography and GIScience", Association of American Geographers, Boston, April 2017.

"Current Issues in GIS Education", Shenzhen University, March 2017.

"Technologies of Space and Place", Inaugural Lecture, Hong Kong Polytechnic University, March 2017; Planning Department, Shenzhen, March 2017; D.K. Stanley Lecture, University of Florida, March 2017.

"Technologies of Space and Place", Kansas State University, February 2017; RMIT University, February 2017

"Discrete Global Grids". University College London, June 2016; Geoscience Australia, February 2017

"The Science of Where", Esri User Conference, Delhi, January 2017

"Building on the Legacy of Roger Tomlinson", Esri User Conference, Delhi, January 2017

"Realizing the Potential of CyberGIS for Science and Management", Geospatial World Forum, Hyderabad, January 2017

"Successful Response Starts with a Map", Geospatial World Forum, Hyderabad, January 2017

"A Spatial Turn in Health Research?", Geospatial World Forum, Hyderabad, January 2017

"Laws of Geography", Institut de Géographie, Paris, December 2016

"Space and Place in the Social Sciences and Humanities", Université de Paris Diderot, December 2016

"The Consumerization of GIS", GIS Day, University of Idaho, November 2016

"A Spatial Turn in Health Research?", GIS Day, Centers for Disease Control and Prevention, Atlanta, November 2016

"Spatially Integrated Social Science", El Colegio Mexiquense, Toluca, November 2016

"Is CyberGIS Transformative?". Opening keynote, Third International Conference on CyberGIS and Geodata Science, University of Illinois at Urbana-Champaign, July 2016.

"Space, Place, and GIS". Innolec Lectureship, Masaryk University, Brno, May 2016

"Techniques, Theory, and Practice for a Spatial Turn in Health Research". Lecture and workshop, University of Calgary, February 2016

"The Consumerization of GIS". Distinguished Lecture, Hong Kong Polytechnic University, Wuhan University, January 2016

"Space, Place, and GIS". Chinese University of Hong Kong, January 2016

"Current Issues in GIS Education". GIS Education Conference, University of Toronto, December 2015

"Future Opportunities in GIS and Science", Esri African Users Conference, Cape Town, November 2015

"Facets of GIScience". Esri African Users Conference, Cape Town, November 2015

"Introduction to Digital Earth". International Symposium on Digital Earth, Halifax, October 2015

"Keeping the Dream Alive". Keynote, International Symposium on Digital Earth, Halifax, October 2015

"25 Years of Progress: GIScience 2015". Keynote, Ozri 2015, Melbourne, September.

"The Science behind Good UI Design". Ozri 2015, Melbourne, September.

"Space, Place, and GIS". University at Buffalo, April 2015.

"Space, Place, and GIS". Hammond Lecture, University of Tennessee, February 2015.

"Big Data and GIS". Oak Ridge National Laboratory, 2015.

"Big Data and GIS". Masaryk University, Brno, December 2014.

"GIS Applications in Planning". Tsinghua University, November 2014.

"Big Data and GIS Applications". Dalian Maritime University, Chinese University of Petroleum, Northwest University, Chang'an University, Capital Normal University, November 2014.

"Space, Place, and GIS". Kohn Colloquium, University of Iowa, November 2014.

"Is Big (Geo)Data the Next Big Thing in GIScience?" University College, London, October 2014.

"Space, Place, and GIS". University of Greenwich, October 2014.

"Uncertainty in Geospatial Data". Computing Community Consortium Workshop: "Uncertainty in Computation", Washington DC, October 2014

"Geodesign with CyberGIS". Second International Conference on CyberGIS, Redlands, CA, August 2014.

"GIS Designing Our Future". RMIT University, Melbourne, July 2014.

"VGI Transforming the World". GeoCrowd Summer School, St Andrews University, July 2014,

"Mapping Spatial Capital". 3rd International Symposium EIDOLON, Laval University, Quebec, July 2014.

"Space, Place, and Health". High-Level Forum: Fostering International Geospatial Health Research Collaborations: Challenges and Opportunities. Chinese University of Hong Kong, June 2014.

"Geosensors". GeoHealth Round Table, Gävle, Sweden, March 2014.

"Space and Place". University of Redlands, January 2014.

"Advances in the Mapping Sciences: Towards a Spatially Enabled Society". Board on Earth Sciences and Resources, National Research Council, 25th Anniversary meeting, Washington, DC, November 2013.

"GIS: Designing Our Future". Northeast Normal University, Changchun; Information Engineering University, Zhengzhou; Henan University, Kaifeng; Lanzhou University; November 2013.

"Big Data, the Cloud, the Internet, and GIS". Taiyuan University of Technology, Taiyuan, November 2013.

"Geodesign: Understanding Human Health". Information Center, Ministry of Health, Beijing, October 2013.

"High-Resolution Satellite Remote Sensing Imagery and Its Application". Chinese Academy of Sciences, October 2013; State Forestry Bureau, Beijing, October 2013.

"The Promise of Geodesign". Keynote, Geodesign International Conference: Maximizing the Benefits, Beijing, October 2013.

"Enhancing the Value of Remote Sensing". Plenary Address, International Geoscience and Remote Sensing Symposium (IGARSS), Melbourne, July 2013.

"The Quality of Big (geo)Data". Open Forum on Research Opportunities and Challenges in GIScience. Tongji University, Shanghai, China, June 2013.

"Planning in a Geospatially Enabled Society". Opening Keynote, 21st International Conference on Geoinformatics, Kaifeng, China, June 2013.

"The Challenge of a Curved Earth". Symposium on Digital Earth: A Discrete Global Grid Approach, Banff, May 2013.

"GIS: Designing Our Future". Hubei Surveying and Mapping Bureau, Wuhan; Jiangxi Surveying and Mapping Bureau, Nanchang; Nanjing Normal University. May 2013.

"GeoDesign in Urban Planning". Chongqing Planning Bureau, May 2013.

"Geographic Intelligence". International School of Software, Wuhan University, May 2013.

"The Future of GISystems and Science". Sun Yat Sen University, Guangzhou; Wuhan University. May 2013.

"GIScience for the Smart City". Opening keynote, Geospatial Information Summit on Smart City, Wuhan University, May 2013.

"Increasing the Power of Place". Keynote, 2013 Washington State GIS Conference, Lynwood WA, May.

"Old Debates, New Opportunities". *Progress in Human Geography* Plenary, Annual Meeting, Association of American Geographers, Los Angeles, April 2013.

"Critical GIScience Circa 2013". Alt.GIS Workshop, Santa Barbara, April 2013.

"Reinventing the Geospatial World: 2020 or 1984?" University of Kentucky, April 2013.

"Emerging Trends: Communities". Keynote, EUROGI imaGIne Conference, Dublin, March 2013.

"Exploring Digital Earth". Keynote, 47th Annual Alaska Surveying and Mapping Conference, Anchorage, February 2013.

"Visualizing Geospatial Uncertainty". Distinguished Lecture, SCI Institute, University of Utah, January 2013.

"Integrating Space-Time Analysis". Space-Time GIScience and Analysis Forum, Chinese Academy of Sciences, Beijing, November 2012.

"Integrating Space-Time Analysis". Space-Time GIScience and Analysis Forum, Wuhan University, November 2012.

"Geographic Intelligence". Keynote, SpaceTimeLab Launch Event, University College, London, October 2012.

"Geographic Intelligence". Department of Geography colloquium presentation, University of Washington, October 2012

"A Personal Perspective on Cave Navigation". "Caves and Cognition: Exploring the Cave Experience from Multidisciplinary Perspectives", University of California, Merced, October 2012.

"Exploring Digital Earth". Keynote, GIS-Pro 2012, Portland, OR, October.

"The Future of Digital Earth". Keynote, GeoInformatics 2012, Chinese University of Hong Kong, June.

"Exploring Digital Earth". Retirement Celebration, University of California, Santa Barbara, May 2012.

"Reflections and Visions". Keynote, Global Geospatial Conference, Québec, May 2012.

"GISRUK at 20". Keynote, GIS Research UK, Lancaster, April 2012.

"Geographical Intelligence". Esri Colloquium, Redlands, April 2012.

"GIScience and Spatio-Temporal Analysis: An Overview of Recent Advances". Annual Meeting, Association of American Geographers, New York, February 2012.

"Communicating Spatial Uncertainty". Annual Meeting, Association of American Geographers, New York, February 2012.

"The Quality of Big (Geo)Data". Colloquium presentation, Department of Geography, University of California, Santa Barbara, January 2012.

"GeoDesign: The Way Forward". Keynote, Saudi Planning and GeoDesign Conference, Riyadh, Saudi Arabia, November 2011.

"Where are We? The Spatial Sciences in 2011". Keynote, Surveying and Spatial Sciences Conference, Wellington, NZ, November 2011.

"Discrete Global Grids: Retrospect and Prospect". Keynote, Workshop on Global Spatial Grid 2011, Beijing, November.

"Geographical Intelligence". Keynote, GeoMundus Conference, Münster, Germany, October 2011.

"Critical Spatial Thinking". Lunchtime speaker, 34th Applied Geography Conference, University of Redlands, October 2011.

"Realizing the Vision of CyberGIS". Plenary Address, NSF CyberGIS Project All Hands Meeting, Oak Ridge, TN, September.

"Spatial Thinking and the GIS User Interface". Keynote, International Conference: Spatial Thinking and Geographic Information Sciences 2011. Tokyo, September.

"GIS Today and Tomorrow: A US Perspective". PASCO Corp, Tokyo, September 2011.

"Digital Earth: Inventory and Prospect". Keynote, Hengstberger Symposium "Towards Digital Earth: 3D Spatial Infrastructures". University of Heidelberg, September 2011.

"Geographic Intelligence". Keynote, European Colloquium on Quantitative and Theoretical Geography, Harokopio University, Athens, September 2011.

"Geographic Intelligence". Keynote, GeoInformatics 2011, Shanghai, June.

"The Changing Face of GIS". University of Miami, April 2011.

"Citizens as Sensors: The World of Volunteered Geography". George Mason University, March 2011.

"It's about Time: The Temporal Dimension in VGI". Keynote, Esri Redlands Week, February 2011.

"Challenges in GIS Research". University of Redlands, February 2011.

"Perspectives from the GIScience Research Community". NIH-Wide GIS Infrastructure Workshop, Rockville, MD, February 2011.

"Data Synthesis: A New Statistical Paradigm". Department of Statistics, University of California, Los Angeles, January 2011.

"Challenges in Geographic Information Science". Conference on Enhancing Latin American GIS&T Capacity for Innovation and Economic Development, Panama City, December 2010.

"From Community Mapping to Critical Spatial Thinking: The Changing Face of GIS". Distinguished Lecture, Social, Behavioral, and Economic Sciences Directorate, National Science Foundation, Washington DC, November 2010.

"The Future of Geographic Information Science". James Madison University, November 2010.

"Citizens as Sensors: The World of Volunteered Geography". Mapping Science Committee, National Research Council, Washington DC, October 2010.

["The Changing Face of GIS"](#). 12th Japan-Korea International Symposium on GIS, Kyoto, October 2010.

["The Changing Face of GIS"](#). School of Geographic Sciences and Planning, Arizona State University, October 2010.

["Twenty Years of Progress: GIScience in 2010"](#). Schermerhorn Lecture, Opening Academic Programme, ITC 2010–2011, Enschede, Netherlands, September.

["Challenges in GIS Research"](#). Master Class, ITC, Enschede, Netherlands, September 2010.

["The Changing Face of GIS"](#). Tenth Anniversary Inaugural Lecture, New University of Lisbon, September 2010.

"Optimizing Feature Matching in Conflation" with Linna Li. GIScience 2010, Zurich, September.

"Researching the Geocrowd". Opening Keynote, Third Spatial Socio-Cultural Knowledge Workshop, Defence Academy, Shrivenham, UK, June 2010.

["The Future of Geography in an Emerging Information-Technology Society"](#). University of Cologne, June 2010.

"Fundamental Spatial Concepts". University of Cologne, June 2010.

["Volunteered Geographic Information"](#). GEOIDE Summer School, Calgary, June 2010.

"Fundamental Spatial Concepts". Keynote, GEOIDE Summer School, Calgary, June 2010.

"Twenty Years of Progress: GIScience in 2010". Opening Keynote, Joint International Conference on Theory, Data Handling and Modelling in Geospatial Information Science, Hong Kong Polytechnic University, May 2010.

"The Evolving Landscape of MCMD Information Flow". Opening Keynote, US-Taiwan Workshop on the Advancement of Societal Response to Mega-Disasters Afflicting Mega-Cities, Taipei, May 2010.

["The Changing Face of GIS"](#). Geoinformatik 2010, Kiel, Germany, March

["The Changing Face of GIS"](#). Technical University of Graz, Austria, March 2010

["Challenges in GIS Research"](#). Opening Keynote, GISRUK Conference, London, April 2010

["The Changing Face of GIS"](#). Keynote, Fifth Saudi Arabian GIS Conference, Dammam, April 2010

["The Changing Face of GIS"](#). University of Nottingham, April 2010

["The Changing Face of GIS"](#). University of Leicester, April 2010

["GIS as a Sandbox: The Challenge of Spatio-Temporal Analysis and Modeling"](#). Space-Time Modeling and Analysis Workshop, Redlands, CA, February 2010

"CyberGIS: What Still Needs to be Done?". Opening Keynote, CyberGIS Workshop, Washington DC, February 2010.

"Spatial by Design: Understanding the Special Role of GIS". Keynote, GeoDesign Summit, Redlands, January 2010.

"Geographical Information Systems and Science: Today and Tomorrow". Opening keynote, Workshop on GIS Technology and Applications, Indian Institute of Technology, Bombay, December 2009.

"Uncertainty in Geographical Information". Workshop on GIS Technology and Applications, Indian Institute of Technology, Bombay, December 2009.

["The Changing Face of GIS"](#). Michigan State University, October 2009.

["The Changing Face of GIS"](#). Capital Normal University, Beijing, October 2009.

"Geographic Information Systems and Science: Today and Tomorrow". Keynote Address, International Conference on Mining Science and Technology, Xuzhou, October 2009.

["The Changing Face of GIS"](#). Keynote Address, International Conference on Mining Science and Technology, Xuzhou, October 2009.

"Virtual Geographic Environments as Collective Constructions". Wuhan University, October 2009.

"Enabling Analysis in Space and Time". Opening Keynote, International Symposium on Spatial Analysis, Spatio-Temporal Data Modeling and Data Mining (ISSA 2009), Wuhan, October.

["The Changing Face of GIS"](#). Keynote Address, GIS in the Humanities and Social Sciences 2009, Taipei, October.

"Enabling Analysis in Space and Time". Opening Keynote, Conference on "The Dynamics of Space-Time Use: Measurement, Patterns, and Consequences". Ohio State University, October 2009.

["The Changing Face of GIS"](#). Institute for Remote Sensing Applications, Chinese Academy of Sciences, Beijing, September 2009.

"Digital Earth: A Decadal Assessment". Sixth International Symposium on Digital Earth, Beijing, September 2009.

["The Changing Face of GIS"](#). Opening Keynote, 17th International Conference on Geoinformatics, George Mason University, August 2009.

"The Quality of Geospatial Context". First International Workshop on Quality of Context (QuaCon 2009), Stuttgart, June 2009.

["California Reality and Nova Scotia Dreaming"](#). Tech Social, Nova Scotia Community College, Middleton, June 2009.

"The Changing Face of GIS". Geomatics Atlantic, Wolfville, Nova Scotia, June 2009.

"Formalizing Place in Geographic Information Systems". Conference on Place, Health and Equity, University of Washington, May 2009.

"Geographic Information Systems and Science: Today and Tomorrow". University of California, Merced, April 2009.

["Citizens as Sensors: The World of Volunteered Geography"](#). GeoJournal Plenary Lecture, Association of American Geographers, Las Vegas, March 2009.

"Business Opportunities in the Evolving Geoweb". University of Mary Washington, March 2009.

"SDI: Now What?" Institut Cartografic de Catalunya, Barcelona, February 2009.

["The Geospatial Web: A State of the Art Report"](#). INPE, Sao Jose dos Campos, Brazil, February 2009.

"Geographic Information Systems and Science: Today and Tomorrow". University of Minnesota, January 2009.

"Citizens as Sensors: Web 2.0 and the World of Volunteered Geography". University of Western Ontario, December 2008.

"Geography and Geospatial Science: Today and Tomorrow". Centers for Disease Control and Prevention, Atlanta, December 2008.

"Citizens as Sensors: Volunteered Geographic Information". World University Network Virtual Seminar in NeoGeography, December 2008.

"Geographic Information in the World of Web 2.0". Borchert Lecture, University of Minnesota, November 2008.

"Simulation, Modeling, and Digital Earth: Status and Prospects". Digital Earth Summit on Geoinformatics: Tools for Global Change Research. Potsdam, November 2008.

"Spatial@ucsb: Perspectives for Teaching and Research". National Geographic Society, November 2008.

["GIS and GIScience: Today and Tomorrow"](#). Chinese Academy of Sciences, Beijing; Sichuan University, Chengdu; Chinese Academy of Sciences, Lanzhou; Chinese Academy of Sciences, Urumqi; Wuhan University; October 2008.

"Fundamental Spatial Concepts". Wuhan University, October 2008.

"A Geostatistical Framework for Geospatial Data Analysis and Modeling across Multiple Spatial and Temporal Scales". NGA Academic Research Program conference, Washington DC, September 2008.

"Virtual Geographic Environments as Collective Constructions". Keynote Address, International Workshop on Indoor Spatial Awareness, Seoul, August 2008.

"Successful Response Starts with a Map: Improving Geospatial Support for Disaster Management". Special Lecture, Korean Research Institute for Human Settlements, Seoul, August 2008.

["The Geospatial Web: A State of the Art Report"](#). Keynote Address, IEEE Conference on Semantic Computing, Santa Clara, August 2008.

"Top Down or Bottom Up: Geographic Data Production and Web 2.0". Keynote Address, GeoWeb 2008, Vancouver, July.

"Assertion and Authority: User-Generated Geographic Content". Keynote Address, GI-Forum 2008, Salzburg, July.

"Authority and Assertion: The Science of User-Generated Geographic Content". Colloquium for Andrew U. Frank's 60th Birthday, Vienna University of Technology, June 2008.

"Spatial Accuracy 2.0". Keynote Address, Eighth International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences, Shanghai, June 2008.

"Representation of Geospatial Futures". National University of Ireland, Maynooth, May 2008.

"GIS 101". Isoscapes Conference, Santa Barbara, April 2008.

"The Future of GIS and Geospatial Technology in Our Changing World". Oak Ridge National Laboratory and the University of Tennessee, March 2008.

"SKling for GIScience". First Annual Conference on Spatial Knowledge and Intelligence, Fernie, BC, February 2008.

"GIS Frontiers in Transportation". University of California Transportation Center annual student conference, UC Santa Barbara, January 2008.

"Virtual Geographic Environments as Collective Constructions". Opening keynote, International Conference on Developments in Visualization and Virtual Environments in Geographic Information Science, Chinese University of Hong Kong, January 2008.

"The Global Positioning System: Where Are We Now?" Ventura College, November 2007.

["Citizens as Sensors: The World of Volunteered Geography"](#). Festival International de Geographie, St-Dié-des-Vosges, France, October 2007; Minghi Distinguished Lecture, University of South Carolina, February 2008; ESRI, March 2008.

"Geographic Information Science for Sustainability". Conference on Geographical Concepts in the Academy: Sustainability, GIS, and the World, Clark University, September 2007.

"Transportation and GIScience". Transportation Research Board, Washington, September 2007.

"GIS, Map Accuracy, and Statistics". Joint Statistical Meetings, Salt Lake City, August 2007.

["Towards User-Centric Description of Data Quality"](#). Keynote Presentation, International Symposium on Spatial Data Quality, Enschede, June 2007; Technical University of Munich, July 2008.

"Culture in Place: New Geospatial Tools for the Humanities". University of California, San Diego, May 2007; University of California, Los Angeles, May 2008.

"What Has GIS Done to Geography?". University of California, Santa Barbara, Geography Colloquium, February 2007; Pennsylvania State University, March 2007.

"Successful Response Starts with a Map: Improving Geospatial Support for Disaster Management". Management Association for Private Photogrammetric Surveyors, Washington DC, March 2007; Subcommittee on Disaster Reduction, Executive Office of the President, Washington DC, June 2007; University of Mary Washington, October 2007.

"Fundamental Spatial Concepts". Keynote Address, Workshop on Spatial Thinking in the Humanities and Social Sciences, University of Illinois at Urbana-Champaign, December 2006; ESRI, May 2008.

"The Case for Space". Seminar on GIS, Spatial Concepts and Social Science, University of California, Berkeley, November 2006; Curtin University, November 2007; Temple University, November 2007; Ryerson University, November 2007.

"Statistical Perspectives on Spatial Social Science". Morris Hansen Memorial Lecture, Washington Statistical Society, Washington DC, November 2006.

"Fine-Scale Urban Representation". Academicians' Forum, School of Urban Design, Wuhan University, Wuhan, China, October 2006.

"The Spatial Web: Visions for a Geospatial World". Keynote Address, Geoinformatics 06, Wuhan, China, October; Los Alamos National Laboratory, February 2007; Nova Scotia Community College, Lawrencetown, March 2007; Dalhousie University, March 2007; University of Redlands, May 2007; Los Angeles County Health Department, February 2008.

"Representation and Computation of Geographic Dynamics". Plenary Presentation, UCGIS Research Workshop on Computation and Visualization for the Understanding of Dynamics in Geographic Domains. Maritime Institute, Linthicum Hts, MD, October 2006; Keynote, GIS Research UK, April 2007; Keynote, 13th European Community GI and GIS Workshop, Porto, July 2007; Curtin University, November 2007.

"Conflation Research in Support of Digital Gazetteers". NGA Academic Research Program annual symposium, Washington DC, September 2006.

"The Spatial Web: Visions for a Geographically Enabled World". Plenary Presentation, International Geographical Union, 2006 Brisbane Regional Conference, July; Queen's University, Belfast, April 2006; Presidential Lecture, National University of Ireland, Maynooth, April 2006; Colorado State University, November, 2006; Willamette University, September 2007; University of Mary Washington, October 2007; Charles Drew University, October 2007; Curtin University, November 2007.

"Statistical Perspectives on Geographic Information Science". Legends in Quantitative Geography and Spatial Science, International Geographical Union, 2006 Brisbane Regional Conference, July.

"GIS Futures". Keynote Address, Location 2006 (Annual User Conference, ESRI Ireland), Belfast and Dublin, June 2006.

"A Brief History of Geospatial Data Modeling". Keynote Address, GEOIDE Conference, Banff, June 2006; University of Nebraska, Lincoln, April 2008.

"What Has GIS Done to Geography". Keynote Address, Conference of Irish Geographers, Dublin, May 2006.

"Responding Better: Geographic Information in Emergency Management". Keynote Address, Northern Ireland Biennial Conference, Association for Geographic Information, Belfast, May 2006.

"Directions in GIScience". World University Network, Seminar in GIScience, March 2006.

"It All Starts with a Map: Training and Planning for Disaster". Spatial Literacy in Teaching and Communicating GIScience, Royal Geographical Society, London, February 2006.

"GIS in Business". Dublin Institute of Technology, February 2006.

"The Fundamental Laws of GIScience". University of Leeds, February 2006; University of Zurich, January 2006.

"GIS, GIScience and Spatial Data: An American Perspective". "GIS in Practice", National University of Ireland, Maynooth, January 2006.

"Augmenting Geographic Reality". National University of Ireland, Galway, December 2005.

"Future Directions for Geolibraries" Spatial Analysis International Workshop, University College, Dublin, October 2005.

"What Does Google Earth Mean for the Spatial Sciences?" Plenary Address, Spatial Sciences Conference, Melbourne, Australia, September 2005; Keynote Address, Annual Conference, IRLOGI, Dublin, October 2005; Geographic Visualization across the Social Sciences, National Centre for E-Social Science, University of Manchester, June 2006; University of Oklahoma, July 2006.

"The Transition of GIS from Academic Research Novelty to Billion-Dollar Industry". Annual Conference, CRC-SI, University of Melbourne, September 2005.

["Towards a General Theory of Geographic Representation in GIS"](#). International Symposium on Spatio-Temporal Modeling, Spatial Reasoning, Spatial Analysis, Data Mining and Data Fusion (STM 05), Beijing, August 2005; University College, Cork, November 2005; National University of Ireland, Maynooth, March 2006. .

"Uncertainty and Interoperability: The Areal Interpolation Problem". International Symposium on Spatial Data Quality (ISSDQ 05), Beijing, August 2005.

"GIScience and Interoperability". Joint Research Centre of the European Commission, Ispra, Italy, July 2005.

"Enabling Spatial Analysis: The Center for Spatially Integrated Social Science". Research Society on Alcoholism, Santa Barbara, June 2005.

"Globalizing GIS". Opening Keynote, GISPlanet 2005, Estoril, Portugal, May.

"Future Directions for Geolibraries". Cartography Users Advisory Committee, Library of Congress, May 2005.

"What Do GIS Professionals Need to Know?" GeoSpatial World 2005, San Francisco, April.

["The Fundamental Laws of GIScience"](#). University of Texas, Austin, April 2005; University of Leeds, February, 2006; Colorado State University, November, 2006.

["Geo-Information for Disaster Management"](#). Keynote, First International Conference on Geo-Information for Disaster Management, Delft, the Netherlands, March 2005.

"Geographic Information Systems and Science: Enabling a Location-Based Technology". Hong Kong Polytechnic University, March 2005.

"Directions in GIS". Keynote, Coastal Geotools 05, Myrtle Beach, SC, March.

"Best Practices for Visualizing Uncertain Information in Geography". National Research Council Workshop, "Toward Improved Visualization for Uncertain Information", Washington DC, March 2005.

"Exploiting Spatial Technologies in Health Research". Charles Drew University, February 2005, and the University of Southern California, January 2005.

"Spatially Integrated Social Science". Inaugural Conference, Australian Research Council Research Network in Spatially Integrated Social Science, Brisbane, December 2004.

["Bits of Geography: Maps and Mapping in the Digital Age"](#). Haynes Lecture, Texas A&M University, November 2004.

"The Case for Space". Jacob Marschak Interdisciplinary Colloquium on Mathematics in the Behavioral Sciences, UCLA, November 2004.

"From Vespucci to GIS". International Conference "Vespucci e la Modernita", Florence, Italy, October 2004.

"Geographic Information Systems and Science: Enabling a Location-Based Technology". National Centre for Geocomputation, National University of Ireland Maynooth, October 2004.

"Cutting Edge Spatial Solutions in the Globalized World". International Symposium and Exhibition on Geoinformation 2004, Kuala Lumpur, September

"GIS: Time, for a Change", ESIG 2004, Lisbon, June.

"Educating the Next Generation of Geospatial Professionals", Intergraph Geospatial World conference, Miami, May 2004

"Thinking Spatially in the Social Sciences", Stanford University, May 2004

["The Fundamental Laws of GIScience"](#), ESRI and University of Redlands, April, 2004

"Acknowledging and Representing Uncertainty", Conference on History and Geography: Assessing the Role of Geographical Information in Historical Scholarship, Newberry Library, Chicago, March 2004.

["Bits of Geography"](#), Hunter College, CUNY, March 2004.

"GIScience, Geography, Form, and Process", Presidential Plenary, Centennial Meeting of the Association of American Geographers, Philadelphia, March 2004.

"Spatial Perspectives for the Globe", Keynote Address, Specialist Meeting on Globalization in the World System: Mapping Change over Time", University of California, Riverside, February 2004.

["Models for Uncertainty in Area-Class Maps"](#), Fifth Australasian Postgraduate Workshop on GIS, Social and Environmental Modelling, Kioloa, New South Wales, February 2004.

["The Fundamental Laws of GIScience"](#), Seoul National University, November 2003.

["Spatially Enabled E-Government"](#), Keynote Address, 8th International Seminar on GIS, Seoul, November 2003.

["Digital Earth: Recent Technical Progress"](#), Keynote Address, First Taipei International Conference on Digital Earth, November 2003.

["Bits of Geography"](#), Hooker Distinguished Lecture, McMaster University, October 2003.

["Augmenting Geographic Reality"](#), McMaster University School of Geography and Geology, October 2003.

["Bits of Geography"](#), Chancellor's Distinguished Lecture, Louisiana State University, October 2003.

["Recent Advances in GIScience"](#), National Center for Atmospheric Research, Boulder, Colorado, September 2003

["GIS and Modeling"](#), Environmental Systems Research Institute, September 2003.

["The Fundamental Laws of GIScience"](#), Environmental Systems Research Institute, September 2003.

["The GIScience Research Agenda: Inventory and Prospect"](#), Royal Geographical Society/Institute of British Geographers Annual Conference, September 2003.

["The Fundamental Laws of GIScience"](#), Department of Geography, University of Cambridge, September 2003.

["Spatial Data Infrastructure and Science"](#), Guest Lecture, Vespucci Summer Institute, Florence, August 2003.

["The Spatial Web"](#), Guest Lecture, Vespucci Summer Institute, Florence, August 2003.

"[The Fundamental Laws of GIScience](#)", Keynote, Annual Assembly, University Consortium for Geographic Information Science, Monterey, CA, June 2003

"[Finding the Mainstream](#)", Keynote, ScanGIS 2003, Helsinki, June.

"[Bits of Geography](#)". 2003 Faculty Research Lecture, University of California, Santa Barbara, April.

"[Models for Uncertainty in Area-Class Maps](#)". Second International Symposium on Spatial Data Quality, Hong Kong, March 2003.

"[Augmenting Geographic Reality](#)", Distinguished Lecture, Hong Kong Polytechnic University, March 2003.

"[Augmenting Geographic Reality](#)", ESRI India, Bangalore, January 2003.

"[Finding the Mainstream](#)", MapIndia 2003, New Delhi, January..

"[Linking Science to Practice in Landscape Change](#)", National Science Foundation, January 2003.

"[Data Access and Data Warehousing](#)", Keynote, GeoHealth 2002, Victoria University, Wellington, December.

"[Finding the Mainstream](#)", Keynote, Joint AURISA and ISA Conference, Adelaide, November 2002.

"[Augmenting Geographic Reality](#)", Southwest Texas State University, November 2002.

"[Thinking Spatially in the Social Sciences](#)", Brown University, October 2002.

"[Augmenting Geographic Reality](#)", University of Maryland, College Park, October 2002.

"[GIS and Spatial Statistics: One World View or Two?](#)", Spatial Statistics: Integrating Statistics, GIS, and Statistical Graphics, University of Washington, October 2002.

"[What's Special about Spatial?](#)", Quantitative Methods in the Social Sciences, UCSB, October 2002.

"[Accession and Sharing of Geographic Information](#)", CODATA, Montreal, October 2002.

"[Augmenting Geographic Reality](#)", University of Colorado, September 2002.

"What's Special about Spatial?", University of California, Irvine, September 2002.

"Field Computing", National Research Council, Mapping Science Committee, August 2002.

"Augmenting Geographic Reality", Lawrence Livermore National Laboratory, August, 2002.

"New Directions in Remote Sensing Education", NASA Workshop on Educating the Next Generation of Remote Sensing Professionals, University of New Hampshire, August 2002.

"GIS Education: The Next Level", Keynote, ESRI Education Users Conference, San Diego, July 2002.

"The Value of Spatially Explicit Modeling", Short Course on the Economics of Urban Sprawl and Land Use Change, Donald Bren School of Environmental Science and Management, University of California, Santa Barbara, June 2002.

"GIS in the Field". Keynote address, Geoinformatics 2002, Nanjing, June.

"Augmenting Geographic Reality". East China Normal University, Shanghai, May 2002.

"Augmenting Geographic Reality". University College, London, May 2002.

"The Nature and Value of Geographic Information". Association for Geographic Information, London, May 2002.

"Scales of Cybergeography". Center for Advanced Spatial Analysis, University College, London, May 2002.

"Augmenting Geographic Reality: Origins and Evolution of Geographic Information Systems". Los Alamos National Laboratory, April 2002.

"Geospatial Data: The Bottom Line". Keynote, GeoTec Event, Toronto, April 2002.

"Why Space? Six General Principles". Association of American Geographers, Annual Meeting, Los Angeles, March 2002.

"Augmenting Geographic Reality". Gregory Lecture, University of Southampton, March 2002.

"Placing Liberal Arts Learning in a Geographic Context: Examples from the Earth and Social Sciences". Carleton College, February 2002.

"Augmenting Geographic Reality". Environmental Systems Research Institute, Redlands, February 2002.

"Augmenting Geographic Reality". Department of Geography, Syracuse University, November 2001.

"What Is Spatially Integrated Social Science, and What Might It Contribute to Social Science History?" Social Science History Association, Chicago, November 2001.

"Towards Spatially Integrated Social Science". George Mason University, November 2001.

"Geospatial Computation in Social Science: Basic Research, Applications, and Instructional Challenges". Department of Computer Science, University of Nebraska, November 2001.

"GIS: Time for a Change". Keynote Address, Urban and Regional Information Systems Association, Long Beach, October 2001.

"The Digital City: Inventory and Prospect". Keynote Address, International Conference on Urban Geoinformatics, Wuhan, October 2001.

"Current Research Issues in GIS". UN Development Program Conference on Application of GIS Technologies to Local Level Planning, New Delhi, October 2001.

"Application of GIS Technologies to Local Level Planning". Inaugural Address, UN Development Program Conference, New Delhi, October 2001

"A Geographer Looks at Spatial Information Theory". Keynote Address, International Conference on Spatial Information Theory (COSIT), Morro Bay, September 2001.

"The Future of Education in GIScience". 21st ESRI International User Conference, San Diego, July 2001.

"Geography Network and Gazetteers: Place Name Access to Spatial Locations". 21st ESRI International User Conference, San Diego, July 2001.

"Geodatabase: The ArcGIS Transportation Data Model (UNETRANS)". 21st ESRI International User Conference, San Diego, July 2001.

"New Directions in GIS". Department of Computer Science, Keele University, July 2001.

"The Nature and Value of Geographic Information". "Conference: The I in GIScience", Manchester, UK, July 2001.

"GIS and Spatial Analysis". Interuniversity Consortium for Social and Political Research, Ann Arbor, May 2001.

"Models for Uncertainty in Area Class Maps". GEOIDE workshop on spatial statistics, Quebec, May 2001.

"Tools and Scholarship in Natural Resources: A Creative Tension?". Tools Symposium, University of Idaho, April 2001.

"Geographic Information Technologies in Transportation: New Directions". Iowa State University, Center for Transportation Research and Education, March 2001.

"Collaboration through Internet GIS". Social Science Research Council, workshop on Information Technology in Social Science Research, University of Michigan, March 2001.

"Introduction to the Alexandria Digital Earth Prototype". Association of American Geographers, New York, February 2001.

"Introduction to CSISS". "Center for Spatially Integrated Social Science: A Critical Evaluation", Association of American Geographers, New York, February 2001.

"Transportation Infrastructure Management". Conference on Remote Sensing and Spatial Information Technologies for Transportation, Transportation Research Board, National Academy of Sciences, December 2000.

"Applications of Remote Sensing". Workshop, Conference on Remote Sensing and Spatial Information Technologies for Transportation, Transportation Research Board, National Academy of Sciences, December 2000.

"Center for Spatially Integrated Social Science". American Society of Criminology, San Francisco, November 2000.

"GIS for Infrastructure Applications". National Forum on Advanced GIS Applications and Database Needs for Civil Infrastructure Systems, New York University, October 2000.

"Challenges of Mathematical Geography". Teias Matematicas, University of Coimbra, Portugal, October 2000.

"Scale in Remote Sensing and GIS". Symposium on Spatial Statistics for Remote Sensing, ITC, Enschede, Netherlands, October 2000.

"Potential Contributions of Geographic Information Sciences to Health Studies". Pacific Rim Health Studies Workshop, Scripps Institute of Oceanography, September 2000.

"Models for Uncertainty in Area Class Maps". Remote Sensing Society, Leicester, UK, September 2000.

"Adding Value to Geographic Information". Keynote Presentation, Remote Sensing Society, Leicester, UK, September 2000.

"Digital Earth". Keynote Presentation, Fourth International Conference on Integrating GIS and Environmental Modeling, Banff, September 2000.

"Distributed Geolibraries and the Digital Earth Project". EarthVIZ, University of California, Santa Cruz, May 2000.

"The Alexandria Digital Earth Prototype". Workshop on Gridded Population Databases, Columbia University, May 2000.

"Scales of Cybergeography". Brown Lecture, University of Minnesota, April 2000.

"Spatially Integrated Social Science: Building the Research Infrastructure". Association of American Geographers, Pittsburgh, April 2000.

"Spatial Analysis in a Communicating World". Invited Plenary Session, Mathematical Models and Quantitative Methods Specialty Group, Association of American Geographers, Pittsburgh, April 2000.

"Discrete Global Grids for Digital Earth". International Conference on Discrete Global Grids, Santa Barbara, March 2000.

"Scientific Information". Information Technology Workshop II, University Consortium for Atmospheric Research, Boulder, CO, January 2000.

"Towards a Geography of Geographic Information". University of California, Los Angeles, January 2000.

"Visions for the Digital Library". Pacific Neighborhood Consortium/Electronic Cultural Atlas Initiative, University of California, Berkeley, January 2000.

"Implementing Digital Earth: a research agenda". Keynote Presentation, International Symposium on Digital Earth, Beijing, November 1999.

"Spatial RDBMS: Opportunities and Challenges". Driven by Data, Los Angeles, November 1999.

"The Future of Geographic Information Science". University Hart Lecture, University of Sheffield, November 1999.

"Towards a Geography of Geographic Information". Ohio State University, October 1999; and University of Sheffield, November 1999.

"The Future of Gazetteers". Opening keynote, Digital Gazetteer Information Exchange, Washington, October 1999.

"New Horizons: Geographic Information Systems". OECD Conference on Social Sciences for a Digital World: Building Infrastructure for the Future, Ottawa, October 1999.

"Measurement-Based GIS". University at Buffalo, September 1999.

"Cartographic Futures for a Digital Earth". University of Cincinnati, September 1999.

"New Directions in Environmental Problem Solving". EPA Conference on Environmental Problem Solving with Geographic Information Systems, Cincinnati, September 1999.

"Cartographic Futures on a Digital Earth". Keynote Presentation, International Cartographic Association, Ottawa, August 1999.

"The Value of a Digital Library for Earth System Education". Opening Keynote, Geoscience Digital Library Workshop, Coolfont, WV, August 1999.

"Measurement-based GIS". Opening keynote, International Symposium on Spatial Data Quality, Hong Kong, July 1999.

"GIS and Social Science: New Tools, New Perspectives". Columbia University, May 1999

"Uncertainty in Geographic Data: Models and Strategies". Lamont-Doherty Observatory, Columbia University, May 1999.

"Keynote: More than Technology: GIS Applications for the Future". IMAGIN Forum, Lansing, Michigan, May 1999.

"Keynote: GIS and Transportation: Status and Challenges". International Workshop on GIS for Transportation and Intelligent Transportation Systems, Hong Kong, April 1999.

"Future Directions in Geographic Information Science". University of Saskatchewan and University of Calgary, January 1999.

"Towards a Geography of Digital Geographic Information in a Digital World". University of Saskatchewan and University of Calgary, January 1999.

"Geomatics and Geographic Information Science: Trans-Century Directions and Applications". Spatial Information Science and Technology (SIST '98), Wuhan Technical University of Surveying and Mapping, December

"Challenges in Geographic Information Science". University of California, Berkeley; University of Oregon; Oregon State University; November 1998

"Keynote: Gateway to the Earth". U.S. Geological Survey, Reston, October 1998

"Spatial Analysis: Problems and Issues in Mountain Environments". Montana State University, September 1998

"Finding Data for Geocomputation". Geocomputation 98, Bristol, September

"Rediscovering the World Through GIS. Prospects for a Second Age of Geographical Discovery". GISPLANET 98, Lisbon, September

"Spatial Analysis in GIS and Remote Sensing". 5th International Congress on Sciences of the Earth, Santiago, Chile, August 1998

“Education and Training in GIS: An NCGIA Perspective”. 5th International Congress on Sciences of the Earth, Santiago, Chile, August 1998

“The UCGIS Research Agenda”. ESRI User Conference, San Diego, July 1998

“Encapsulating Simulation Models with Geospatial Data Sets”. Third International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences, Quebec City, May 1998

“Fuzzy Spatial Queries in Digital Spatial Data Libraries”. FUZZ-IEEE 98, Anchorage, May 1998

“Digital Libraries for Geocomputation”. Advances in Digital Libraries (ADL 98), Santa Barbara, April 1998

“Where Can Increased Funding Really Make a Difference?”. UCGIS Congressional Breakfast, April 1998

"Spatial Technologies and the City", MIT, April 1998

"Positional Distortion in Geographic Data Sets as a Barrier to Interoperation". American Congress on Surveying and Mapping, Baltimore, March 1998

“New Directions in Geographic Information Science”. University of Wisconsin, Madison, November 1997

“National Science Priorities in Geoinformatics”. Networking Resources for Competitive Earth Systems Science, American Association for the Advancement of Science, Sioux Falls, SD, November 1997

“From GIS to Geographic Information Science: New Directions in Geographic Research”. University Harris Lecture, Texas A&M University, November 1997

“Cartography and Geographic Information Systems”. National Academy of Sciences, Academy Industry Program, Forum on Imaging and Visualization, Newport Beach, October 1997

“The Future of Spatial Data and Society”, keynote presentation, Geomatics Atlantic '97, Halifax, Nova Scotia, October 1997

“Geographic Information Technologies Transform the Information Professions”. Dalhousie University, October 1997

“Conference Assessment and Future Trends for GIS”, Third GIS Asia Pacific Conference, Jakarta, October 1997

"New Directions in the Information Sciences", University of Wyoming, September 1997

Invited discussant, "Geographic Information Research at the Millennium", GISDATA Final Conference, Strasbourg, September 1997

"GIS and Geography: Presidential Session", Association of Pacific Coast Geographers, Spokane, WA, September 1997.

"The New Generation of Scholars: Do They Really Need Us?" Invited presentation, Association of College and Research Libraries, American Library Association, San Francisco, June 1997.

"Views from the U.S. Mapping Science Committee: Past, present, and future". University Consortium for Geographic Information Science 1997 Annual Assembly and Summer Retreat, Bar Harbor, ME, June.

"An Update on the US National Center for Geographic Information and Analysis" and "GIS and Its Impacts on Organizations: Effects of New Technologies". ESIG '97, Lisbon, June.

"The GIS Research Agenda". Keynote presentation, SCANGIS '97, Stockholm, June.

"NCGIA's Varenus Project: Advancing Geographic Information Science". University of Newcastle-upon-Tyne, May 1997.

"GIS, Spatial Analysis, and the Geographical Key". European Research Conference, "Socio-Economic Research and Geographic Information Systems". Il Ciocco, Italy, May 1997.

"The GIS Research Agenda". University College, London, Centre for Advanced Spatial Analysis and Department of Photogrammetry and Surveying, May 1997.

"From GIS to Geographical Information Science". London School of Economics, May 1997.

"Research and Development: What has been achieved so far?" and "Spatial Information and Its Impact on Society". Conference: 10 Years After Chorley: The future for geographic information. The Royal Society, London, May 1997.

"Communicating the Results of Accuracy Assessment: Metadata, Digital Libraries, and Assessing Fitness for Use". First CASSINI International Workshop, Paris, April 1997.

"The Geolibrary". AGI Guest Lecture, GISRUK '97, Leeds, April 1997.

"Enabling Technologies and Educational Impacts: GIS". Atlantic Institute Think Tank V, "Global Education Paradigms in Geomatics/Geoinformation", Paris, April 1997.

"Modern Geographic Information Systems and Model Linking". Wageningen Agricultural University, Netherlands, February 1997.

"Keynote: Geographic Data and the New Information Profession". ALISE, Washington DC, February 1997.

"Distributed Information Infrastructure". US Congress, January 1997.

"Environmental Information Management - A Learned Perspective". Royal Roads University, Victoria, BC, January 1997.

"GIS Research". Surveys and Land Information, Cape Town, South Africa, December 1996.

"The Past and Future of Geographic Information Technology". GEO FORUM '96, Bakersfield, CA, December 1996.

"GIS as a Research Technology". Workshop on GIS Application in Cancer Research, Washington, DC, November 1996.

"Generalization, Uncertainty, and Error Modeling". GIS/LIS 96, Denver, November 1996.

"Accuracy of Spatial Databases". GIS in Illinois 1996 Conference, Schaumburg, November.

Keynote address: "The Past and Future of Geographic Information Technologies". GIS in Illinois 1996 Conference, Schaumburg, November.

"Directions in GIS". University of Michigan, September 1996.

Keynote Address. 1996 Genasys Conference, Fort Collins, August.

"Digital Libraries and Spatial Information Processing". IRREGULAR '96, Santa Barbara, August 1996.

"GIS, Spatial Analysis, and Interoperability". International Geographical Congress, The Hague, August 1996.

"Multiple Roles for GIS in Global Change Research". Joint ESF/NSF Second Summer Institute on Geographic Information Systems, Villa Borsig, Berlin, July 1996.

"Keynote Address: Directions in GIS". GIS Technology and Applications 1996, Taipei, May 1996.

"GIS the Academic Way: New Ideas from the Ivory Tower". ESRI User Conference, Palm Springs, May 1996.

"Communicating the Results of Accuracy Assessment: Metadata, Digital Libraries, and Assessing Fitness for Use". Second International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences, Fort Collins, CO, May 1996.

"Has GIS Killed Cartography?". Presidential Session, Association of American Geographers, Charlotte, NC, April 1996.

"Keynote Address: Directions in GIS". California GIS Conference 1996, San Francisco, February.

"Geographic Information Science and Geography". University of Western Ontario, Department of Geography, February 1996; and Michigan State University, Department of Geography, February 1996.

"The Alexandria Digital Library". Michigan State University, Department of Geography, February 1996.

"Alexandria and Spatial Metadata". North Carolina GIS Conference, Winston-Salem, February 1996

"Finding Geography in the Digital Library". University of Minnesota, Department of Geography, February 1996.

"Keynote Address: Directions in GIS". Third International Conference/Workshop on Integrating GIS and Environmental Modeling, Santa Fe, January 1996.

"Accuracy of Spatial Databases" and "Spatial Analysis". Institut Geographique National, Paris, November 1995.

"Keynote Address: Spatial Data Libraries". First Conference on Spatial Multimedia and Virtual Reality, Lisbon, October 1995.

"Technical Advances in Spatial Data Sharing". URISA 95, San Antonio, TX, July 1995.

Keynote speaker, Tenth Annual Towson State GIS Conference, Towson, MD, June 1995.

"Computational Geography". Keynote Address, ACM International Workshop on Computational Geometry, University of British Columbia, Vancouver, June 1995

"The Alexandria Digital Library". ESRI Users Conference, Palm Springs, CA, May 1995.

"Future Directions for Geographic Information Science". Keynote Address, GeoInformatics '95, Hong Kong, May 1995.

"The Application of Advanced Information Technology in Assessing Environmental Impacts". Keynote Address, 1995 Bouyoucos Conference, Riverside, May 1995.

Keynote Address, New Mexico Geographic Information Council Annual Conference, Albuquerque, April 1995.

"The Alexandria Project". Council for Networked Information Spring Conference, Washington, DC, April 1995.

"An Update on GIS Research". Keynote Address, ERDAS User Group Meeting, Atlanta, March 1995.

"The Context of Alexandria: Library and Extracomputational Issues". Annual Meeting, AAG, Chicago, March 1995.

"GIS, Spatial Representation, and Statistical Mapping". International Symposium on Computer Mapping in Epidemiology and Environmental Health, Tampa, February 1995.

"Digital Spatial Data Libraries". University of Southern California, January 1995.

"An Update on GIS Research". Fifth Annual Nevada State GIS Conference, Reno, December 1994.

"The Bottom Line of Spatial Accuracy". 22nd AURISA Conference, Sydney, November 1994.

"Spatial Databases for Global Environmental Issues". 8th Toyota Conference, Mikkabi, November 1994.

"Accuracy of Spatial Databases". Applied Geography Conference, Akron, Ohio, October 1994.

"GIS Data Models for IVHS Map Databases". Applied Geography Conference, Akron, Ohio, October 1994.

"GIS and Mathematical Geology: Status and Prospects". International Association of Mathematical Geologists, Mt Tremblant, Que, October 1994.

"GIS Tutorial". Workshop on Antarctic GIS, Reston, VA, September 1994.

"GIS Research and NCGIA", University of Stockholm, September 1994.

"Keynote Address". Third Annual Natural Resources GIS/GPS Conference, Columbia College, Sonora, CA, August 1994.

"GIS Error Models and Visualization Techniques for Spatial Variability in Soils". 15th International Congress of Soil Science, Acapulco, July 1994.

"Geographic Information Science: Research and Education Needs of the National Spatial Data Infrastructure" and "Spatial Information in Contemporary Social Science". National Science Foundation, Washington DC, June 1994.

"Visualization of Uncertainty". International Conference on Spatial Accuracy of Natural Resource Databases, Williamsburg, VA, May 1994.

"GIS Research and NCGIA". Stanford University, April 1994.

"GIS Research and NCGIA". University of St Andrews, March 1994.

"GIS State of the Art". First Education-GIS Conference, Washington DC, January 1994.

"Accuracy of Spatial Databases", and "GIS and Geography". University of Colorado, Boulder, October 1993.

"Keynote Presentation: Spatial Data Issues". Second International Conference/Workshop on Integrating GIS and Environmental Modeling, Breckenridge, CO, September 1993.

"Integrating GIS and GPS". The Institute of Navigation, Salt Lake City, September 1993.

"Uncertainty in Spatial Data: Challenges for Spatial Statistics". University of California, Riverside, May 1993.

"Geographic Information Systems Research at the NCGIA". Lockheed Palo Alto Colloquia, April 1993.

"Geographic Information Systems: Research and Exploration". New York University, April 1993.

"Integrating the Spatial Data Technologies". On Common Ground Conference, Denver, April 1993.

"GIS in the Future". Keynote address, North Carolina GIS Conference, Raleigh, April 1994.

"Accuracy of Spatial Data: Problem or Opportunity?". Keynote paper, Iowa State University GIS Fair, April 1993.

"Intuition, the Spatial Perspective, and ESDA". NCGIA Initiative 14 Workshop on Exploratory Spatial Data Analysis, Santa Barbara, February 1993.

"Accuracy of Spatial Data: Problem or Opportunity?" Ministry of Natural Resources, Province of Ontario, Toronto, February 1993.

"Keynote Address: Accuracy of Spatial Data: Problem or Opportunity?" Interagency Committee on Geomatics, Government of Canada, February 1993.

"Accuracy of Spatial Databases", University of Utah, February 1993.

"GIS Research and NCGIA", University of Utah, February 1993.

"The Spatial Perspective: Geographic Information in Contemporary Social Science". Jacob Marschak Interdisciplinary Colloquium on Mathematics in the Behavioral Sciences, UCLA, January 1993.

"A User Perspective on Quality Control". GIS/LIS 92, San Jose, November 1992.

"Towards a National Research Agenda in GIS". GIS/LIS 92, San Jose, November 1992.

"The Most Appropriate Discipline for GIS". GIS/LIS 92, San Jose, November 1992.

"Findings and Recommendations of the Governor's Geographic Information Task Force". GIS/LIS 92, San Jose, November 1992.

"GIS Research and the NCGIA". First Annual Meeting, GIS Association of Japan, Tokyo, October 1992.

"GIS overview". Hitachi, Japan, October 1992.

"GIS and Social Science". CIESIN, Saginaw, and ICPSR, University of Michigan, Ann Arbor, August 1992.

"Error Models for Spatial Data". Joint Statistical Meetings, Boston, August 1992.

"Visualization of Fuzzy Scenes and Probability Fields". Fifth International Symposium on Spatial Data Handling, Charleston, SC, August 1992; Workshop on GIS and Visualization, Loughborough University, UK, July 1992.

"Overview of Metadata Issues". Information Exchange on Spatial Metadata, Federal Geographic Data Committee, Washington, June 1992.

"Accuracy of Spatial Databases". Bionetics, Kennedy Space Center, June 1992.

"GIS: Science or Profession?". American Society of Civil Engineers, 8th Conference on Computing in Civil Engineering, Dallas, June 1992.

"GIS Research and Education". Texaco GIS Conference, Houston, May 1992.

"GPS as an Aid to Spatial Data Quality: The Pluses and Minuses". On Common Ground Conference, Denver, April 1992.

"Error and Uncertainty in Spatial Data". Kansas Geological Survey, Lawrence, March 1992.

"Research Agenda in GIS". University of Kansas, Department of Geography, Lawrence, March 1992.

"Trends in GIS". IBM Corp, Kingston NY, March 1992.

"Visualizing the Uncertainty in Multinomial Fields". Interface 92 (24th Symposium on the Interface: Computing Science and Statistics). College Station, TX, March 1992.

"Geographic Information Systems". Mare Amico (Friends of the Sea), Livorno, Italy, March 1992.

"Geographic Information Systems". University of Bologna, Italy, March 1992.

"Plenary Address: Technical Developments". GIS '92, Vancouver BC, February 1992.

"Accuracy of Spatial Databases". Department of Geosciences, University of California, Riverside, February 1992.

"A Factorial Model of Aggregate Spatio-Temporal Behavior: Application to the Diurnal Cycle". SUNY Buffalo, November 1991; University of Milan, December 1991.

"Recent Research in Census Data Mapping and Spatial Analysis". Censimenti: Applicazioni Statistiche e Computer, Turin, December 1991.

"Keynote Address: Geography and Statisticians". Statistics Canada, Symposium 91, Ottawa, November 1991.

"Integrating GIS and Environmental Modeling at Global Scales". GIS/LIS 91, Atlanta, October 1991.

"Spatial Analysis with GIS: Problems and Prospects". GIS/LIS 91, Atlanta, October 1991.

"Introduction to GIS". IAMSLIC, Galveston, October 1991.

"Current Research in Spatial Decision Support Systems". URISA, San Francisco, August 1991.

"Keynote Address: GIS Research and Education in the USA". EDIS/SAGIS, Pretoria, July 1991.

"GIS and Spatial Analysis". AAG, Miami, April 1991.

"Is GIS a New Discipline?". AAG, Miami, April 1991.

"Keynote Address - Accuracy of Spatial Databases". University of Melbourne, June 1991.

"Accuracy of Spatial Databases". University of Canterbury, Christchurch NZ, June 1991; University of Georgia, October 1991.

"GIS Data Modeling". University of Dunedin, NZ, June 1991.

"NCGIA Education Activities: The Core Curriculum and Beyond". IBM Academic Users Conference, Dallas, June 1991.

"Keynote Address - Progress on the GIS Research Agenda". Second European GIS Conference, Brussels, April 1991.

"Trends in GIS Applications". Western Association of Map Librarians, Santa Barbara, March 1991.

"GIS and Social Science". NCGIA GIS in the Social Sciences conference, Santa Barbara, March 1991.

"Integrating GIS and Spatial Analysis". University of Sheffield, March 1991.

Keynote Address, State Mapping Advisory Committee, Columbia SC, January 1991.

"GIS and Geography". University of South Carolina, January 1991; University of Maryland, March 1991.

"GIS and Environmental Modeling". IIPS, New Orleans, January 1991.

"Modeling Error in Spatial Databases". GIS/LIS 90, Anaheim, November 1990; University of Maryland, March 1991.

"Interpreting Individual Behavior According to Space-Time Models in a GIS: Halifax, 1971". Social Science History Association, Minneapolis, October 1990.

"GIS Futures". University of Connecticut, Storrs, October 1990; Environment Canada, September 1990; IBM, Southbury CT, May 1990.

Banquet Address: "GIS in the 1990s". Joint NESTVAL/Middle States AAG meeting, Norwich CT, October 1990.

Keynote Address: "What Have We Learned from the 1980s?". GIS Seminar and Exhibition, Toronto, September 1990.

Keynote Address: "Spatial information Science". Fourth International Symposium on Spatial Data Handling, Zurich, July 1990.

"Issues in Next Generation GIS". AM/FM Executive Seminar, Keystone CO, July 1990.

Keynote Address. North Texas GIS Workshop, May 1990.

Keynote Address: "GIS and Cartography". 8th Australian Cartographic Conference, Darwin, April 1990

"A Hierarchical Spatial Data Structure for Global Geographic Information Systems". Advanced Computing in the Social Sciences, Williamsburg, VA, April 1990; CAG, Edmonton, June 1990; Fourth International Symposium on Spatial Data Handling, Zurich, July 1990.

"The Elusive Population Center of Canada". Statistics Canada, March 1990.

"GIS and Geography". University of Wisconsin, University of British Columbia, Simon Fraser University, February 1990.

"Building Global Databases using GIS". University of Victoria, February 1990.

"GIS Data Models". Energy, Mines and Resources Canada, March 1990; University of Victoria, February 1990.

"A General Framework for the Spatial Interpolation of Socioeconomic Data". North American Regional Science Association, Santa Barbara, November 1989; Advanced Computing in the Social Sciences, Williamsburg, VA, April 1990.

"GIS and Marketing Research". Applied Geography Conference, Binghamton, October 1989.

"GIS and the New Geography". First Midlands GIS Lecture, Leicester, UK, October 1989 (sponsored by AGI).

"Optimal Tiling for Cartographic Databases". International Cartographic Association (14th Congress), Budapest, August 1989; Symposium on the Design and Implementation of Large Spatial Databases, Santa Barbara, July 1989; Kent State University, October 1989.

"Modeling Error in Spatial Databases". Western Regional Meeting, Institute of Mathematical Statistics, Davis, June 1989; Applied Geography Conference, Binghamton, October 1989.

Geographic Information Systems". Congressional breakfast sponsored by Consortium of Social Science Associations, June 1989

"NCGIA Core Curriculum Project". GIS in Higher Education, Ohio State University, June 1989; June 1990.

"Geographic Information Systems". IBM Higher Education Executive Conference, Orlando, May 1989.

"GIS Research". University of Iowa, April, 1989.

"Optimal Tiling for Large Cartographic Databases". AutoCarto 9, Baltimore, April 1989.

"Three Mode Factor Analysis and Diurnal Cycles of Urban Activity". Western Regional Science Association, San Diego, February 1989.

"Structuring Spatial Analysis for Geographic Information Systems". AAAS, San Francisco, January 1989.

"Accuracy of Spatial Data". University of Delaware, February 1989; University of Idaho, March 1989; EPA Great Lakes GIS Workshop, October 1989; University of Victoria, February, 1990; University of Wisconsin, February 1990; Indiana GIS Workshop, November 1990.

"Geographic Information Systems and Spatial Analysis". San Diego State University, February 1989; University of North Carolina, Chapel Hill, February 1989; University of Delaware, February 1989; University of Idaho, March 1989.

"The National Center for Geographic Information and Analysis". GIS Conference, Denver, September 1988; GIS/LIS '88, San Antonio, November 1988; University of Delaware, February 1989; IBM, Palo Alto, January 1989; Jet Propulsion Laboratory, January 1989; National Science Foundation, December 1988, October 1989; Applied Geography Conference, Binghamton, October 1989; Great Lakes GIS Workshop, October 1989; GIS East, Washington DC, June 1990.

"The City in Space and Time: A Daily Time Geography of Halifax". CAG, Halifax, May 1988.

"Issues of Accuracy in Global Databases". IGU Global Database Planning Project, UK, May 1988.

"Trade Area Delimitation with Thiessen Polygons". Statistics Canada, April 1988.

"Issues in the Storage of Spatial Data". Digital Equipment Corporation, Marlboro, April 1988.

"Algorithms for Two Generalized Thiessen Problems". AAG, Phoenix, April 1988.

"Modeling Error in Spatial Data Handling". University of Washington, Seattle, February 1988.

"The Global Database Planning Project". NOAA, Boulder, February 1988.

"Data Quality". Statistics Canada, January 1988.

"Disposal of Formation Fluids by Oil Producers in Petrolia, Ontario - An Environmental Economic Assessment". Ontario Ministry of the Environment, 1987 Technology Transfer Conference, Toronto, November 1987.

"Application of a GIS Benchmarking and Workload Estimation Model". Applied Geography Conference, Knoxville, October 1987.

"Towards an Enumeration and Classification of GIS Functions". IGIS, Washington, November 1987.

"Hardware and Software for Geographic Information Systems". NSF/ESRC conference, Edinburgh, September 1987.

"The Coverage Problem and Visibility Regions on Topographic Surfaces". ISOLDE IV, Namur, Belgium, June 1987.

"Objective Methods for Trade Area Delimitation". Canadian Regional Science Association, Hamilton, May 1987.

"Lakes on Fractal Surfaces: A Null Hypothesis for Lake-Rich Landscapes". MGUS (Mathematical Geologists in the United States), San Francisco, April 1987; CAG, Hamilton, Ont., May 1987.

"Revealed Specialization within American geography". Association of American Geographers, Portland, Oregon, April 1987.

"Models of Cartographic Error". University of California, Santa Barbara, March, 1987.

"A Model of Error for Choropleth Maps, with Applications to Geographic Information Systems". Auto Carto 8, Baltimore, March 1987.

"Models of Cartographic Error". Ohio State University, March, 1987.

"Geographic Information Systems and Spatial Analysis". McMaster University, January, 1987; Rutgers University, February, 1987.

"Performance Evaluation and Benchmarking for Geographic Information Systems". SUNY at Buffalo, January, 1987.

"Affinity Groups and Specialization in North American Geography". East Lakes Division, Association of American Geographers, East Lansing, October 1986.

"Performance Evaluation and Workload Estimation for Geographic Information Systems". Second International Symposium on Spatial Data Handling, Seattle, July 1986.

"Fractals and Spatial Analysis", University of Auckland, June 1986.

"Geographical Information Systems: A Canadian Perspective", New Zealand Geographical Society, Auckland, June 1986.

"Spatial Analysis", Australian National University, May 1986.

"Geographic Information Systems in the Undergraduate Curriculum", University of Lancaster, December 1985; University of New South Wales, April 1986; Australian Defence Force Academy, April 1986.

"Hydrologic Simulation of Fractal Surfaces", CSIRO, Canberra, April 1986.

"Keynote address: The Design and Applications of Thematic Mapping Systems", CSIRO, Canberra, April 1986.

"The Professional Standing of Geography", UWO/UQAM conference, London, November 1985.

"The Multiobjective Vending Problem: A Generalization of the Travelling Salesman Circuit", Regional Science Association, Philadelphia, November 1985.

"Recent Developments in Fractals and Terrain Simulation", Canadian Cartographic Association, Fredericton, June 1985.

"Geographic Information Systems in Undergraduate Geography: A Contemporary Dilemma", Canadian Association of Geographers, Trois Rivières, May 1985.

"Statistics of hydrologic networks on fractional Brownian surfaces", 16th Conference on Modelling and Simulation, Pittsburgh, April 1985.

"Location-allocation and impulsive shopping: the case of gasoline retailing", AAG, Detroit, April 1985.

"Fractals", University of Kentucky, February 1985.

"Fractals", Ohio State University, November 1984.

"Discrete Space Location-Allocation Solutions from Genetic Algorithms", CAGONT/ELDAAG, Waterloo, November 1984.

"Methods and Algorithms for Boundary Definition", International Symposium on Spatial Data Handling, Zurich, August 1984.

"Discrete Space Location-Allocation Solutions from Genetic Algorithms", International Symposium on Locational Decisions, Boston, June 1984.

"Optimizing Raster Storage: A Comparison of Four Alternatives", Canadian Cartographic Association, London, Ontario, June 1984.

"Toward an Explanatory Model of Individual Behaviour and Urban Ecological Structure", CAG, Nanaimo, May 1984.

"Diurnal Variation in Urban Ecological Structure", AAG, Washington, D.C., April 1984.

"Spatial Aggregation and Intransitivity in US Migration Streams", Modelling and Simulation Conference, Pittsburgh, April 1984.

"Intransitivity and Spatial Aggregation in US Migration Flows", State University of New York at Buffalo, February 1984.

"Geographic Information Systems", Ontario Association for Remote Sensing, Toronto, December 1983

"The Time Geography of a Canadian City", AAG East Lakes Division, Cincinnati, November 1983.

"Location-Allocation Modelling", Canada-China Conference, Hamilton, November 1983.

"Optimizing Raster Storage: An Examination of Four Alternatives", Auto-Carto VI, Ottawa, October 1983.

"Methodological Problems in the Calibration of Sales Forecasting Models", Sixth Applied Geography Conference, Toronto, October 1983.

"The Dynamics of School Projections", Association of Educational Research Officers, Toronto, June 1983.

"Interactive Computer Cartography and School Planning", Canadian Cartographic Association, June 1983.

"Location-Allocation Algorithms for Small Computers", Lincoln Institute, Boston, May 1983.

"The Dynamics of School Projections", Ontario Association of School Business Officials, London, May 1983.

"Transportation Indicators of Space-Time Autonomy", AAG, Denver, April 1983.

"Location-Allocation Algorithms for Small Computers", Modelling and Simulation Conference, Pittsburgh, April 1983.

"On Enumerating All Feasible Solutions to Polygon Aggregation Problems", Modelling and Simulation Conference, Pittsburgh, April 1983.

"Diurnal Patterns of Social Group Distributions in a Canadian City", Regional Science Association, Pittsburgh, November 1982.

"Some Micro-Computer Algorithms for Large Location-Allocation Problems", International Conference on Improving the Geographical Accessibility of Rural Services, Bangalore, India, July 1982.

"Statistical Estimation of an Attribute Variable from a Boundary File Overlay", Canadian Cartographic Association, Lindsay, June 1982.

"The Fractional Brownian Process as a Terrain Simulation Model", Modelling and Simulation Conference, Pittsburgh, April 1982.

"Applied Location-Allocation in the Private Sector", Association of American Geographers, San Antonio, Texas, April 1982.

"Moving Solutions to Median-Type Problems", Symposium on New Frontiers in Location-Allocation Modelling, Binghamton, May 1982.

"Computer Mapping Applications in Site Selection", Western Michigan University, January 1982.

"Computer Graphics", Computer Society of India, Ahmedabad, January 1982.

"The Corridor Location Problem", Indian Institute of Management, Ahmedabad, January 1982.

"Location-Allocation Problems", Indian Institute of Management, Ahmedabad, January 1982.

"Spatial Autocorrelation: Patterns and Problems", University of Oklahoma, November 1981.

"Towards the Time Geography of a Canadian City", East Lakes Division, AAG, Bowling Green, Ohio, November 1981.

"Randomness at Random Island: Stochastic Models of the Physical Landscape", Canadian Association of Geographers, Corner Brook, August 1981.

"Accuracy and Spatial Resolution: Critical Dimensions for Geoprocessing", Canadian Cartographic Association, Special Seminar on Computerized Cartography, Calgary, June 1981.

"Moving Solutions to Median-Type Problems", Canadian Regional Science Association, Halifax, May 1981.

"Regionalization and Aggregation from Interactions and Flows", Association of American Geographers, Los Angeles, April 1981.

"Complementarity and Substitution in Canadian Leisure Activities", Department of the Secretary of State, Ottawa, March 1981.

"Retail Location Techniques: The Fast Food Experience", University of Calgary, February 1981.

"Persistence and Antipersistence: Spatial Autocorrelation and Fractals", University of Alberta, February 1981.

"Location of Rural Services", Indian Institute of Management, Bangalore, January 1981.

"Recent Advances in Location-Allocation Models", National Association of Geographers, India, January 1981.

"Spatial Autocorrelation: Patterns and Problems", State University of New York, Buffalo, November 1980.

"Randomness and Order in the Topology of Settlement Systems", Canadian Regional Science Association, Montreal, June 1980.

"The Significance of Potential-Density Regressions", Association of American Geographers, Louisville, April 1980.

"Spatial Aggregation Problems in Geographical Analysis", York University, November 1979.

"The Corridor Location Problem", York University, November 1979.

"Geographical Data Capture and Encoding", NATO Advanced Study Institute on Map Data Processing, Maratea, Italy, June 1979.

"Fractals", McMaster University, March 1979.

"The Corridor Location Problem", University of California at Santa Barbara, July 1978.

"Models of Hierarchically Dominated Spatial Interaction", CAG, London, Ontario, May 1978 and University of California at Santa Barbara, July 1978.

"An Approach to the Study of Nodal Growth", Canadian Regional Science Association, Waterloo, Ontario, May 1978.

"Computer Graphics: A State of the Art Report", International Symposium on Integrated Surveys and Resource Management, Manila, Philippines, February 1978.

"Geographical Uncertainties in Location", First International Conference on Locational Decisions, Banff, Alberta, April 1978.

"Modelling Human Spatial Behaviour in Intraurban Recreation Facility Site Location", Wilfrid Laurier University, January 1978.

"Models of Hierarchically Dominated Spatial Interaction", University of Toronto, November 1977.

"The SURF Mapping Package", University of Windsor, November 1977.

"Structure, Application and Error in Geographic Data Handling", University of Calgary, February 1977.

"Estimation from Grid Data: The Map as a Stochastic Process", IGU, Moscow, August 1976, and AAG, Salt Lake City, April 1977.

"Use and Preference in Location Allocation", Johns Hopkins University, January 1976.

"The PLUS System", University of Arizona, April 1975.

"Geometry, Probability and Geographic Information", McMaster University, February 1975.

"Location-Allocation Systems and Human Spatial Behaviour", McMaster University, February 1975.

"Putting Geography Back into Data", Nipissing College, January 1975.

"Use and Preference in Location Allocation Problems", IGU Commission on Quantitative Methods, New Zealand, December 1974.

"Error Estimation for Geographic Data Structures", IGU, New Zealand, December 1974.

"Location Theory and Social Goals", McGill University, 1972.

"Aggregate Temporal Trends in the Spatial Organization of a Service Agency", IBG, Brighton, 1971.

"The Spatial Efficiency of Administrative and Retail Servicing: Empirical Results and Theoretical Implications", MICMOG, 1968.

"The Geomorphology of the Nakimu Caves", National Speleological Society, Birmingham, Alabama, 1967.

"Administrative Areas on a Non-Uniform Population Surface", CAG, Calgary, Alberta, 1968.

Short Courses Given by Invitation [\[Top\]](#)

"The Future of GIScience", Arizona State University, November 2017.

"Big (Geo)Data". Arizona State University, April, 2015.

eSilk Road Summer School, Suzhou, China, June 2013.

"A Short Course in Geoinformatics", Beijing Normal University, November 2011.

"Geographic Information Systems for Psychological Research", APA Advanced Training Institutes, San Francisco, 2007.

"Responding Better: GIS for Emergency Management". One-day workshop, University of Redlands, Masters in GIS program, August 2006, July 2008.

Workshop on Spatial Modeling, ESRI User Conference, 2004, 2005, 2006.

Workshop on Location-Based Services and Augmented Reality, University Consortium for Geographic Information Science, June 2003.

Advanced course on GIS, GIS World Inc, August 1992, August 1993, August 1994.

2 day seminar on GIS, FORMEZ, Naples, December 1991 and May 1993.

Workshop on Data Quality (Dealing with Uncertainty in Spatial Data), ESRI User Conference, Palm Springs, May 1991; AAG, Miami, April 1991; Fifth International Symposium on Spatial Data Handling, Charleston, SC, August 1992; International Association of Mathematical Geologists, Mt Tremblant, Que, October 1994; Geomatics 95, Ottawa, June 1995; Geographic Technologies in Government '95, Washington, September 1995; University of Michigan, September 1996; UCGIS Annual Assembly and Summer Retreat, Bar Harbor ME, June 1997; Helsinki University of Technology, June 2003; National Geospatial-Intelligence Agency, August 2005; University of Redlands, May 2008; GeoWeb Conference, Vancouver, July 2008.

Workshop on Data Analysis and Modeling in GIS Environments (GIS and Spatial Analysis): GIS Conference, Denver, September 1988; GIS/LIS '88, San Antonio, November 1988; AM/FM, New Orleans, April 1989; University of Zurich, April 1989; Fourth International Symposium on Spatial Data Handling, Zurich, July 1990; GIS/LIS 90, Anaheim, November 1990; ESRI, Redlands CA, August 1991; URISA, San Francisco, August 1991; GIS/LIS 91, Atlanta, October 1991; AAG, April 1992; Government Technology Conference 92, Sacramento, May 1992; URISA, Washington, July 1992; GIS World, Fort Collins, August 1992; US Bureau of the Census, September 1992; University of New Mexico, October 1992; GIS/LIS 92, San Jose, November 1992; GIS/LIS, Phoenix, October 1994; AURISA, Sydney, November 1994; International Symposium on Computer Mapping in Epidemiology and Environmental Health, Tampa, February 1995; GIS/LIS 96, Denver, November 1996; ESRI User Conference, San Diego, July 1997, July 1998, July 1999, July 2000, July 2001, July 2002; Minnesota GIS/LIS Workshop, May 1999.

8 lectures on Geographic Information Systems, University of Auckland, June 1986.

2 day seminar on Mathematics and Algorithms for Geographical Data Processing, Canada Land Data System, Environment Canada, March 1985.

4 seminars on Location Allocation problems, Government of Alberta, Sept. 1977.

13 seminars on Geographical Data Processing, U.S. Geological Survey, Washington, D.C., March-June 1976.

Research Grants and Contracts [\[Top\]](#)

US Department of Transportation: "MeTrIS: Metropolitan Transportation Information System Applying Space-Based Technologies for Freight Congestion Mitigation", \$1,995,329, 2007–2010.

National Geospatial-Intelligence Agency: "A Geospatial Framework for Data Analysis and Modeling across Multiple Spatial and Temporal Scales", \$450,000, 2007–2011.

National Institute for Child Health and Human Development: "Advanced Spatial Analysis Training Program for Population Scientists", \$183,592, 2008–2010 (subcontract from Pennsylvania State University).

Minerals Management Service, US Department of the Interior: "GIS Research", \$60,000, 2009–2010.

National Geospatial-Intelligence Agency: "Geospatial Feature Conflation: Conceptual, Statistical, and Optimization Approaches", \$288,548, 2009–2011.

National Science Foundation: "Development and Assessment of Self-Assessed Scales for Everyday Environmental Knowledge (SEEK)", \$200,000, 2009–2012.

Army Research Office, "User-Generated Terrain Information", \$237,392, 2009–2012.

National Science Foundation, "Collaborative Research: A GIScience Approach for Assessing the Quality, Potential Applications, and Impacts of Volunteered Geographic Information", \$149,454, 2009–2012 (collaboration with University of Washington and Ohio State University).

University of California Office of the President: "Virtual Co-Laboratory for Policy Analysis in Greater Los Angeles", \$630,703, 2010–2014 (subaward from University of California, Riverside).

Directorate of Central Intelligence/National Geospatial-Intelligence Agency: "Rapid Interpolation Methods and Accuracy Models for SRTM Digital Terrain Elevation Datasets", \$239,273, 2005–2007 (renewable up to \$359,002).

National Institute for Child Health and Development, Workshops on GIS and Population Science, \$250,000, 2004–2006 (subcontract from Pennsylvania State University).

National Science Foundation, Integration of Geographic Complexity and Dynamics in GIS, \$92,000, 2004–2006 (collaborative with University of Utah and University of Oklahoma).

Centers for Disease Control and Prevention, GIS Science Priorities for Comprehensive Cancer Control, \$50,000, 2004 (subcontract from Research Triangle Institute).

National Geospatial-Intelligence Agency, Strategic Enhancement of NGA's Geographic Information Science Infrastructure, \$1,000,000. 2004–2008 (subcontract from University of Redlands).

National Science Foundation, Project Battuta: Collecting and Using Geospatial Data in the Field, subcontract from Iowa State University, \$700,000, 2000–2003.

US Department of Transportation, National Consortium for Remote Sensing in Transportation - Infrastructure, \$2.1 million, 2000–2004.

National Science Foundation, Center for Spatially Integrated Social Science, \$4.3 million, 1999–2004.

National Science Foundation, Alexandria Digital Earth Prototype, \$5.4 million, 1999–2004.

Ecopetrol (Colombia), Collaboration between Ecopetrol and UCSB/Geography, \$129,243, 1997–1999

Viggen Corporation, Spatial Data Interoperability Testbed Support, \$42,200, 1997

National Imagery and Mapping Agency, Uncertainty in geospatial information representation, analysis, and decision support, \$600,000, 1997–2000

National Science Foundation, Varenius: NCGIA's Project to Advance Geographic Information Science, \$2.3 million, 1997–1999

National Science Foundation, National Center for Ecological Analysis and Synthesis, \$14 million, 1995–2000

California Department of Transportation, Navigable Database, \$160,000, 1995–96

U.S. Army Corps of Engineers, Data Quality in Open GIS, \$70,000, 1995

U.S. Geological Survey, Topographic Framework for the NSDI, \$50,000, 1994

Environmental Systems Research Institute, \$50,000, 1994

National Science Foundation, The Alexandria Project, \$4,788,961, 1994–98

IBM Corporation, A spatial analysis and decision support system, \$1.2 million, 1993–96

California Department of Transportation, Navigable Database, \$135,000, 1993

Maptech, Inc, \$12,685, 1992

Hitachi America Ltd, \$400,000, 1992–95

California Department of Forestry, Accuracy Assessment Task Force, \$68,000, 1991–92; \$19,893, 1992–94

Rockefeller Foundation, GIS and spatial analysis, \$81,817, 1992–94

California Department of Transportation, GIS design and implementation, \$15,000, 1990–92

Los Alamos National Laboratory, \$30,000, 1990–92

IBM Corporation, Joint Study, \$2.5 million, 1990–93

US Geological Survey, Accuracy of Spatial Databases, \$52,000, 1989–90

California Department of Forestry, Assessing conifer lands in California, \$39,000, 1989–91

Statistics Canada, Measures of the national population centre, \$2,500, 1989–90

Statistics Canada, Algorithms for block face polygon generation, \$2,000, 1988–9

National Science Foundation, National Center for Geographic Information and Analysis, \$5.5 million, 1988–93; \$3.9 million, 1993–96

Digital Equipment Corporation, Optical WORM storage for spatial databases, \$85,000, 1988

US Geological Survey, Optical WORM storage for spatial databases, \$15,000, 1988

Statistics Canada, Thiessen polygon algorithms, \$2,000, 1988

Natural Science and Engineering Research Council, Terrain simulation, \$13,000, 1988–9

National Science Foundation, Global Database Planning Project, \$85,000, 1988

Energy, Mines and Resources Canada, Network algorithms for the Electronic Atlas project, \$7,000, 1987

Statistics Canada, Data quality issues for digital cartographic products, \$3,200, 1987

Natural Science and Engineering Research Council, Applications of fractals and related concepts in geographical data processing, \$37,000, 1985–88

Ontario Ministry of the Environment, Site selection for brine disposal, Petrolia, \$6,500, 1985

Social Sciences and Humanities Research Council, The time geography of a Canadian city, \$39,000, 1984–86

Social Sciences and Humanities Research Council, Bilingual accommodation in official language communities, \$30,000, 1983–84

BP/Petro Canada, Rationalization of retail outlets in London, Ontario, \$5,000, 1983

Parks Canada, Resource management study of caves, \$18,000, 1983–84

Natural Science and Engineering Research Council, Generalization and error in maps and geographical data processing, \$27,450, 1982–85

National Institute of Health, A multilevel analysis of U.S. migration flows (subcontracted through University of California, Santa Barbara), \$132,562, 1982–83

London-Middlesex Separate School Board, \$58,000, 1981–84

Social Sciences and Humanities Research Council, The time Geography of a Canadian city, \$9,800, 1982–83

Dept. of Energy, Mines and Resources, Resolution of digital terrain models, \$10,000, 1981–83

Secretary of State, Complementarity and substitution in Canadian leisure activities, \$5,500, 1980

National Research Council, Accuracy in maps and geographical data processing: a fractal approach, \$20,000, 1979–82

Canada Council, Corridor location problem, \$7,500, 1978

Parks Canada, Cave safety survey of Flowerpot Island, \$7,500, 1977

Environment Canada, Geographic Information System, \$3,000, 1977

Agriculture Canada, Geographic Information System, \$7,700, 1975–76

Academic Development Fund, Macrogeographic Systems Research Workshop, \$69,000, 1975–79

University Research Council, Emergency facility location in the City of London, \$1,400, 1974–75

Department of the Environment, A geographic data processing system, \$15,000, 1973–74

University Research Council, Spatial aspects of intra-urban conflict, \$1,150, 1971–72

Canada Council, S71?0445, Aspects of the general location problem, \$2,410, 1971–72

National Research Council A 7482, Response of alpine botanical populations to physical change, \$12,000, 1971–74

National Parks Branch, The history of the development and exploration of the Nakimu Caves, \$500, 1970–71

Canada Council S69?1215, Division of space for administration and public service, and for the location of service facilities, \$2,325, 1970–71

National Advisory Committee on Geographical Research, A biogeographical study of an alpine meadow, \$1,000, 1970–71

National Research Council A 7482, A biogeographical study of an alpine meadow, \$2,000, 1970–71

Consultantships, etc. [\[Top\]](#)

Chair, Advisory Committee, Social, Behavioral, and Economic Sciences Directorate, National Science Foundation, 2008–2010.

Member, International Expert Committee for Strategic Development of the Center for Earth Observation and Digital Earth, Chinese Academy of Sciences, 2009–

Member, Editorial Board, *Letters in Spatial and Resource Sciences*, 2008–

Chair, Committee on Planning for Catastrophe, National Research Council, 2004–2006.

Member, Advisory Committee, Environmental Research and Education Cross-Directorate Program, National Science Foundation, 2006–

Member, Advisory Committee, Social, Behavioral, and Economic Sciences Directorate, National Science Foundation, 2006–

Chair, International Program Committee, 14th International Conference on Geoinformatics (Geoinformatics 2006), Wuhan.

Chair, International Scientific Committee, GISPlanet 2005, Estoril, Portugal.

Member, Editorial Board, *Geoinformation Science Journal*, 2005–

Member, Editorial Board, *Professional Geographer*, 2005–

General Chair, International Conference on Geographic Information Science, Savannah (2000), Boulder (2002), College Park (2004).

Member, Program Committee, Fifth International Symposium on Spatial Data Quality, Beijing, 2005.

Member, Program Committee, 11th International Symposium on Spatial Data Handling, Leicester, 2004.

Member, Commission on Cyberinfrastructure in the Humanities and Social Sciences, American Council of Learned Societies, 2004.

Member, International Steering Committee, Third International Symposium on Digital Earth, Brno, Czech Republic, 2003.

Member, Program Committee, 10th International Symposium on Spatial Data Handling, Ottawa, 2002.

Member, Program Committee, International Symposium on Spatial Data Quality, Hong Kong, 2001, 2003.

Member, Commission on Physical Sciences, Mathematics, and Applications, National Research Council, 1999–2000

Member, International Science Advisory Council, International Society for Photogrammetry and Remote Sensing, 1999–

Member, Editorial Board, *Cartography and Geographic Information Systems*, 1999–

Member, Steering Committee, International IT Conference on Geo-Spatial Education, Hong Kong, July 2000

Co-Chair, International Workshop on GIS for Transportation and Intelligent Transportation Systems, Hong Kong, April 1999.

Member, Science Advisory Board, Fourth International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences

Member, Editorial Board, *Journal of Geographical Systems*, 1998–

Member, Scientific Committee, COSIT 99

Member, International Steering Committee, Geoinformatics '98

Member, Program Committee, International Conference on Modelling Geographical and Environmental Systems with GIS, Hong Kong, June 1998.

Member, Editorial Board, *Applied Geography Studies*

Associate Editor, *Annals, Association of American Geographers*, 1996–2000

Member, Program Committee, Seventh International Symposium on Spatial Data Handling, Delft, 1996.

Member, Editorial Board, *Geoinformatica*

Member, Blue Ribbon Panel on Natural Resources Inventory and Performance Measurement, Natural Resources Conservation Service, US Department of Agriculture, 1995.

Member, Editorial Board, *Transactions in GIS*

Member, Editorial Board, *Geographical Information Sciences*

Member, Organizing Committee, ACM International Workshops on Advances in Geographic Information Systems (ACM GIS'95, '97).

Member, Program Committee, Fourth International Symposium on Spatial Databases, Portland, 1995.

Member, Science Advisory Board, Second International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences, Fort Collins, 1996.

Member, Program Committee, International Association for Mathematical Geology, Mt Tremblant, Que, October 1994.

Member, International Program Committee, Asia GIS/LIS AM/FM and Spatial Analysis Conference, Hong Kong, March 1994.

Member, Program Committee, Sixth International Symposium on Spatial Data Handling, Edinburgh, September 1994.

Member, AAG Standards for Geographic Data Committee, 1993–

Member, Program Committee, COSIT (European Conference on Spatial Information Science) Program Committee, 1993, 1995.

Member, Editorial Board, *Canadian Geographer*

Member, Mapping Science Committee, National Research Council, 1992–1999

Member, 1994 Honors Committee, Association of American Geographers.

Member, Program Committee, Fifth International Symposium on Spatial Data Handling, 1992.

Chair, Research and Education Technical Advisory Committee, State of California Geographic Information Task Force, 1992.

Member, Ad Hoc Committee on Professional Ethics, Association of American Geographers, 1991–3.

Associate Editor, *Location Science*

Member, Editorial Board, *Geographical Systems: The European Journal of Theoretical and Applied Geography*, 1990–

Member, Program Committee, AutoCarto 10

Member, Editorial Advisory Board, *Geo Info Systems*, 1990–

Member, Editorial Advisory Board, *GIS World*, 1990–

Member, Editorial Advisory Board, *Geographical Analysis*, 1990–

Member, Program Committee, Symposium on Spatial Databases '91

Member, Scientific Advisory Board, International Cartographic Association, 1990–

Member, Editorial Board, *The Operational Geographer*, 1989–1997

Member, Editorial Board, Spatial Information Systems Series, Oxford University Press, 1989–

Member, Steering Committee, GIS/LIS 90 and 91

Member, Program Committee, North American Regional Science Association Annual Meeting, Santa Barbara, November 1989.

Member, Program Committee, 4th International Symposium on Spatial Data Handling, Zurich, August 1990.

Member, Program Committee, International Geographical Congress 1992

Chair, Scientific Committee, Global Database Planning Project, IGU, 1987–

Member, Program Committee, IGIS, 1987

Member, Advisory Board, The Institute for Market and Social Analysis, Toronto, 1987–9

Member, Geography and Regional Science Review Panel, National Science Foundation, 1987–9

Secretary and Treasurer, Association of American Geographers, Specialty Group on Geographic Information Systems, 1987–8; Vice-Chair, 1988–9; Chair, 1989–90.

Councillor, Canadian Association of Geographers, 1986–1989

Member, Advisory Editorial Board, *International Journal of Geographical Information Systems*, 1986–

Member, Synthesis and Survey Task Force, Association of American Geographers, 1985–92

Member, Subcommittee on Professional Standing, Canadian Association of Geographers, 1985–86

Chairman, Automation Interest Group, Canadian Cartographic Association, 1984–85

Member, Editorial Board, *Annals of the Association of American Geographers*, 1984–7, 1993–1996

Member, Nominating Committee, Canadian Association of Geographers, 1984–85

Member, Program Committee, Association of American Geographers, 1984–85

Secretary and Treasurer, Association of American Geographers, Specialty Group on Quantitative Methods and Mathematical Models, 1981–84

Member, International Geographical Union, Working Group on Systems Analysis and Mathematical Models

Corresponding Member for Canada, International Geographical Union, Commission on Geographical Data Sensing and Processing

Consultant to: North Slope Borough, Alaska ; TRW Inc.; U.S. Forest Service; Ontario Ministry of Natural Resources; Canadian Department of Energy, Mines and Resources; Tomlinson Associates; Canadian Department of Regional Economic Expansion; Canadian Department of the Environment; Univ. of Manitoba and the Manitoba Planning and Priorities Committee of Cabinet; Canadian Forest Service; University of Arizona; Canadian Secretary of State; Statistics Canada; Canadian Department of Indian and Northern Affairs; SMA Montreal; Bell Canada; U.S. Geological Survey; Alberta Department of Recreation, Parks and Wildlife; Campbell, Sharp Ltd.; Comstat Consulting Services Ltd.; Group West Ltd.; The Earth Technology Corporation; Food and Agriculture Organization of the United Nations; Compusearch Ltd.; ICL (UK) Ltd.; Wild Heerbrugg Ltd.; Environmental Systems

Research Institute; US Environmental Protection Agency; Oregon State University; Indiana University-Purdue University at Indianapolis; EDS Inc; State of Victoria, Australia; Bionetics Inc; League of California Cities; Ecopetrol, Colombia; ERIM; National Ocean Service, NOAA; Microelectronics Center of North Carolina; Scientific Fisheries Associates; Navigation Technologies Inc.

Theses Supervised (as Principal Advisor) [\[Top\]](#)

Glennon, Alan, PhD, 2013, "Analysis of Geographically Embedded Networks"

Royal, Nathaniel, Ph.D., 2011, "*Dracunculiasis*: The Endgame, Proximity, and Risk"

Hurt, Indy M., Ph.D., 2011, "A Spatially Distributed Agent-Based Model for Exploring Tuberculosis Risk Factors in Kenya"

Currier, Katharine E., M.A., 2011, "Auditory Representation in Spatial Applications"

Grossner, Karl, Ph.D., 2010, "Representing Historical Knowledge in Geographic Information Systems"

Li, Linna, Ph.D., 2010, "Design of a Conceptual Framework and Approaches for Geo-Object Data Conflation"

Hastings, Jordan, Ph.D., 2009, "Automatic Conflation of Digital Gazetteer Data: Summary of Research and Demonstration"

Gallo, John, Ph.D., 2007, "Engaged Conservation Planning and Uncertainty Mapping as a Means Towards Effective Implementation and Monitoring"

Rice, Matthew, Ph.D., 2005, "Intellectual Property Control for Maps and Geographic Data"

Sifuentes, Jorge, Ph.D., 2005, "Geographical Information Systems Data Implementation for Analyses of Settlement Patterns of an Early Agricultural Society"

Liu, XiaoHang, Ph.D., 2003, "Estimation of the spatial distribution of urban population using high resolution satellite imagery"

Crosier, Scott, M.A., 2002, "Facilitating the propagation of environmental computational models"

Dibble, Catherine, Ph.D., 2001, "Theory in a complex world: GeoGraph computational laboratories"

Ungerer, Matthew, M.A., 2001, "A new coupling strategy for spatial data analysis and GIS"

Shortridge, Ashton, Ph.D., 2000, "Uncertainty in spatial data measures, models and structures"

Ehlschlaeger, Charles, Ph.D., 1998, "The stochastic simulation approach: tools for representing spatial application uncertainty"

Fohl, Peter, M.A., 1998, "Simulating nominal fields"

Benison, Sean, M.A., 1998, "Field GIS"

Shortridge, Ashton, M.A., 1997, "Characterizing the relationship between 7.5 minute and 1 degree digital elevation models"

Felkner, John, M.A., 1996, "An analysis of international data exchange policy"

Vernon, Greg, M.A., 1994 (by examination)

Palladino, Steven, M.A., 1994, "A role for geographic information systems in the secondary schools: an assessment of the current status and future possibilities"

Dodson, Rustin, M.A., 1993, "Integrating GIS and spatial analysis: an implementation and appraisal of two prototype software linkages"

Burke, Lauretta, M.A., 1993, "Environmental equity in Los Angeles"

Shu, Shourong, M.A., 1992, "Dynamic 3D display of the globe using a hierarchical triangular data model"

Kemp, Karen K., Ph.D., 1992, "Environmental modeling with GIS: A strategy for dealing with spatial continuity".

Schweizer, Diane M., M.A., 1992, "Data quality and choropleth maps: An experiment with the use of color".

Kumler, Mark P., Ph.D., 1992, "An intensive comparison of TINs and DEMs"

Ray, Chiu-Wen, M.A., 1990, "Remote sensing and GIS: establishing consistency between raster and vector data models".

Theobald, David, M.A., 1990, "Automated delineation of hydromorphological features on a triangular irregular network-based digital elevation model"

Lee, Jay, Ph.D., 1989, "Visibility regions on topographic surfaces"

Klinkenberg, Brian, Ph.D., 1988, "Tests of a Fractal Model of Topography"

Glieca, Maria, M.Sc., 1988, "Simulation of channel networks on random topographic surfaces"

Hosage, Catharine M., Ph.D., 1985, "Genetic Algorithms Applied to the p-Median Problem"

Keller, C. Peter, Ph.D., 1985, "Multiobjective Routing Through Space and Time: The MVP and TDVP Problems"

Noronha, Valerian T., Ph.D., 1985, "Functional Regions and Spatial Interaction: The Black-White Model" (winner of 1986 Nystrom Award, Association of American Geographers, for best graduate dissertation)

Klinkenberg, Brian, M.Sc., 1983, "Island Biogeography with Reference to the Lake Erie Islands"

Averack, Richard, Ph.D., 1983, "The Boundary Definition Problem"

Puchalski, Margaret, M.A., 1982, "Extended Testing and Calibration of Choice Set Constrained Spatial Interaction Models"

Rizzo, Brian, M.A., 1982, "The Point of Minimum Aggregate Travel"

Chan, Kelly, M.A., 1982, "Digital Stereo Photomapping and Surface Modelling"

Armstrong, Robin, Ph.D., 1981, "Mapping Social Space: A Social Network Approach"

Lam, Nina, Ph.D., 1980, "Methods and Problems of Areal Interpolation"

Fesenmaier, Daniel R., Ph.D., 1980, "Scale and Aggregation Problems in Geographical Research"

Boost, Barbara, M.A., 1979, "Spatial Distribution of Cancer in Ontario, 1971?1976"

Griffith, Carl, M.A., 1977, "Social Impact Assessment: A Case Study of the Proposed Glengowan Dam and Reservoir"

Lam, Nina, M.A., 1977, "Polygon Overlay: An Examination of an Algorithm and Related Problems"

Moy, Wai-See, M.Sc., 1977, "Estimation from Grid Data: The Map as a Stochastic Process"

Waters, N.M., Ph.D., 1977, "Methodology for Serving the Geography of Urban Fire"

Brozowski, R., Ph.D., 1977, "Revealed Preference in Intra Urban Migration"

Thompson, S.R., M.Sc., 1976, "Vegetation Pattern and Structure in a Micro Region"

Maher, R.V., Ph.D., 1975, "An Enquiry into the Nature of Biogeography"

de Smith, M.J., M.A., 1974, "A Method for Analysing Complex Bounded Shapes"

Armstrong, R.P., M.A., 1973, "Mapping Social Interaction in Meso-Scale Populations"

Waters, N.M., M.A., 1973, "The Southern Ontario Railway System: A Network Analysis"

Ross, J.H., Ph.D., 1972, "A Measure of Site Attraction"

Maher, Robert V., M.A., 1971, "Complexity Analyses of Vegetation Patterns in an Alpine Meadow"

Brown, David, M.A., 1971, "Spatial Distribution of Precipitation Persistence Across Canada"
