

Biographical Sketch

David M. Mark

Professional Preparation

Simon Fraser University (British Columbia, Canada)	Geography	B.A., 1965-1970
University of British Columbia	Geography	M.A., 1970-1974
Simon Fraser University	Geography	Ph.D., 1974-1977

Appointments

1981-present	Department of Geography, State University of New York at Buffalo Asst. Prof. (1981-1983), Assoc. Prof. (1983-1987), and Professor (1987-date)
1995-2000	Member, School of Graduate Studies, University of Maine
1978-1981	Assistant Professor, University of Western Ontario

David M. Mark is a Professor of Geography at the University at Buffalo (UB), the State University of New York, and is the Director of the Buffalo site of the National Center for Geographic Information and Analysis (NCGIA). Mark also is Project Director of the University at Buffalo's two NSF-funded Integrative Graduate Education and Research Traineeship (IGERT) projects in Geographic Information Science, projects that together have supported almost 50 doctoral level trainees in seven academic departments. He also is a member of UB's Center for Cognitive Science. Mark has written or co-authored almost 230 publications, including more than 80 refereed articles, 5 edited books, 30 book chapters, 69 conference proceedings articles, and more than 40 technical reports. He has made almost 230 academic presentations, almost three-quarters at professional meetings, and the others as invited talks at universities and government agencies. Previously, Mark served as Vice-chair (1987-88) and Chair (1988-89) of the Geographic Information Systems Specialty Group of the Association of American Geographers and Chair of the Technology Interest Group, Canadian Cartographic Association (1987-89). Mark was involved in the founding of the University Consortium for Geographic Information Science, and later served as President of the UCGIS (1998). He also has served on numerous international editorial boards and program committees, and was program co-chair for Auto Carto 10 (1991), COSIT'99, COSIT'05, and GIScience 2000 and 2002.

Mark's research interests focus on many aspects of geographic information science, notably geospatial ontology, semantics of geospatial information, spatial cognition and language, history of geographic information systems, human-computer interaction, digital elevation models, and indigenous mapping. His research has been funded by the National Science Foundation, the National Institutes of Health, the National Imagery and Mapping Agency, and other agencies, and he has served on several advisory panels at NSF.

Selected Publications Most Closely Related to Gazetteers:

- Egenhofer, M. J., and Mark, D. M. 1995. Naive Geography. In Frank, A. U. and Kuhn, W., (Eds.), *Spatial Information Theory: A Theoretical Basis for GIS*. Berlin: Springer-Verlag, Lecture Notes in Computer Sciences No. 988, pp. 1-15.
- Frank, A. U., and Mark, D. M., 1991. Language issues for GIS. In Maguire, D. J., Goodchild, M. F., and Rhind, D. W., (editors) *Geographical Information Systems: Principles and Applications*, London: Longmans Publishers, 1, 147-163.

- Mark, D. M., 1993. Toward a Theoretical Framework for Geographic Entity Types. In Frank, A. U., and Campari, I, editors, *Spatial Information Theory: A Theoretical Basis for GIS*, Berlin: Springer-Verlag, Lecture Notes in Computer Sciences No. 716, pp. 270-283.
- Mark, D. M., 2003. Geographic Information Science: Defining the Field. In Duckham, M, Goodchild, M. F., and Worboys, M. F., editors, *Foundations in Geographic Information Science*. London: Taylor & Francis, pp. 1-15.
- Mark, D. M., and Frank, A. U., editors. 1991. *Cognitive and Linguistic Aspects of Geographic Space*. Dordrecht: Kluwer Academic Publishers, ISBN 0-7923-1537-5, 519pp.
- Mark, D. M., and Gould, M. D. 1992. Wayfinding as discourse: A comparison of verbal directions in English and Spanish. *Multilingua*, 11(3), 267-291.
- Mark, D. M., and Gould, M. D., 1991. Interacting with Geographic Information: A Commentary, *Photogrammetric Engineering and Remote Sensing*, 57(11), 1427-1430.
- Mark, D. M., Freksa, C., Hirtle, S.C., Lloyd, R., and Tversky, B. 1999. Cognitive Models of Geographic Space. *International Journal of Geographic Information Science*, 13(8), 747-774.
- Mark, D. M., Kuhn, W., Smith, B., and Turk, A. G., 2003. Ontology, Natural Language, and Information Systems: Implications of Cross-Linguistic Studies of Geographic Terms. in: M. Gould, R. Laurini, and S. Coulondre (Eds.), *AGILE 2003 - 6th AGILE Conference on Geographic Information Science*, Lyon, France, pp. 45-50.
- Mark D. M., and Smith, B., 2004. A Science of Topography: From Qualitative Ontology to Digital representations. Chapter 3 in Michael P. Bishop and John F. Shroder, editors *Geographic Information Science and Mountain Geomorphology*. Chichester, England: Springer-Praxis, pp. 75-100.
- Mark, D. M., Smith, B., Egenhofer, M. J., and Hirtle, S. C., 2004. Ontological Foundations for Geographic Information Science, Chapter 12 in R. B. McMaster and E. L. Usery (eds.), *A Research Agenda for Geographic Information Science*, Boca Raton, Florida: CRC Press, 335-350.
- Mark, D. M., Smith, B., and Tversky, B., 1999. Ontology and Geographic Objects: An Empirical Study of Cognitive Categorization. In Freksa, C., and Mark, D. M., editors, *Spatial Information Theory: A Theoretical Basis for GIS*, Berlin: Springer-Verlag, Lecture Notes in Computer Sciences, pp. 283-298.
- Mark, D. M., and Turk, A. G., 2003. Landscape Categories in Yindjibarndi: Ontology, Environment, and Language. In Kuhn, W., Worboys, M., and Timpf, S., Editors, *Spatial Information Theory: Foundations of Geographic Information Science*, Berlin: Springer-Verlag, Lecture Notes in Computer Science No. 2825, pp. 31-49.
- Mark, D. M., Turk, A. G., and Stea, D., in press. Ethnophysiography of Arid Lands: Categories for Landscape Features. In Eugene Hunn, Brien Meilleur, Leslie Main Johnson, editors, *Landscape Ethnoecology, Concepts of Physical and Biotic Space*. Accepted, in press.
- Ruiz, M. E., Shapiro, S., Abbas, J., Southwick, S. B., and Mark, D. M., 2006. UB at GeoCLEF 2006, 6 pp. *Working Notes for the CLEF 2006 Workshop*, 20-22 September, Alicante, Spain, web document.
- Smith, B., and Mark, D. M., 1998. Ontology and Geographic Kinds. in T. K. Poiker and N. Chrisman (eds.), *Proceedings. 8th International Symposium on Spatial Data Handling (SDH'98)*, Vancouver: International Geographical Union, 1998, 308-320.
- Smith, B., and Mark, D. M., 2001. Geographic categories: An ontological investigation. *International Journal of Geographical Information Science*, 15 (7), 591-612.
- Smith, B., and Mark, D. M., 2003. Do mountains exist? Towards an ontology of landforms. *Environment and Planning B: Planning and Design*, 30(3), 411-427.

Synergistic Activities

Project Director, IGERTs in Geographic Information Science, University at Buffalo. 1998-present.
These NSF funded programs provide innovative blends of education and research training to broadly prepare doctoral students in the field of Geographic Information Science.
<http://www.ncgia.buffalo.edu/igis/>

President, University Consortium for Geographic Information Science, 1997-1998. <http://www.ucgis.org>
Chair, Panel on Cognitive Models of Geographic Space, and Member, Executive Committee, Project Varenus: The NCGIA's Project to Advance the Science of Geographic Information, 1997-present.
<http://www.ncgia.ucsb.edu/varenus/>

Co-leader, NCGIA's Research Initiative 2, Languages of Spatial Relations (1989-1990); NCGIA's Research Initiative 13, User Interfaces for GIS (1991-1994); and NCGIA's Research Initiative 21, Formal Models of Common Sense Geographic Worlds (1996-)
<http://www.ncgia.ucsb.edu/research/research.html>