

BIBLIOGRAPHY

- Abler, R. F. (1987) 'The National Science Foundation Center for Geographic Information and Analysis' *International Journal of GIS* 1, 4: 303-326
- Abler, R. F., Adams, S. and Gould, P. (1971) *Spatial Organization* Englewood Cliffs NJ: Prentice-Hall International
- Alper Systems (1990) 'Staying ahead of the game' *Mapping Awareness* 4, 4: 3-8
- American Farmland Trust (1985) *A Survey of Geographic Information Systems - for Natural Resources Decision Making at the Local Level* Washington DC: AFT
- Anselin, L., Dodson, R. F. and Hudak, S. (1993) 'Linking GIS and spatial data analysis in practice' *Geographical Systems* 1, 1: 3-23
- Arbia, G. (1989) 'Statistical effect of spatial data transformations: a proposed general framework' in M. F. Goodchild and S. Gopal (eds) *Accuracy of Spatial Databases* London: Taylor and Francis
- Arnaud, A. M. (1993) 'GIS in Portugal: from astrolabe to GPS' *GIS Europe* 2, 2: 11-12
- Arnaud, A. M., Craglia, M., Masser, I., Salge, F. and Scholten, H. (1993) 'The research agenda of the European Science Foundation's GISDATA scientific programme' *International Journal of GIS* 7, 1: 463-470
- Aronson, P. (1987) 'Attribute handling for geographic information systems' in N. R. Chrisman (ed.) *Proceedings Auto Carto 8* 346-355
- Avery, T. E. and Berlin, G. L. (1992) *Fundamentals of Remote Sensing and Airphoto Interpretation* 5th edn, New York: Macmillan
- Aybet, J. (1994) 'The object-oriented approach: what does it mean to GIS users?' *GIS Europe* 3, 3: 38-41
- Bachi, R. (1968) *Graphical Rational Patterns: A New Approach to Graphical Presentation of Statistics* Jerusalem: Israel Universities Press
- Bachi, R. and Hadani, S. E. (1988) 'A package for rational computerized mapping and geostatistical analysis and parameters of distributions of populations' Paper presented at the joint meeting of the Quantitative and Medical study groups of the Institute of British Geographers, Lancaster University
- Banai, R. (1993) 'Fuzziness in geographical information systems: contributions from the analytic hierarchy process' *International Journal of GIS* 7, 4: 315-330
- Barr, B. (1993a) 'Census Geography II: a review' in A. Dale and C. Marsh (eds) *The 1991 Census User's Guide* London: HMSO
- (1993b) 'Mapping and spatial analysis' in A. Dale and C. Marsh (eds) *The 1991 Census User's Guide* London: HMSO
- Barrett, E. C. and Curtis, L. F. (1992) *Introduction to Environmental Remote Sensing* London: Chapman and Hall
- Batty, M. and Longley, P. (1994) *Fractal Cities* London: Academic Press

BIBLIOGRAPHY

- Beaumont, J. (ed.) (1989) 'Theme papers on market analysis' *Environment and Planning A* 21, 5
- (1991) *An Introduction to Market Analysis* Concepts and Techniques in Modern Geography 53, Norwich: Environmental Publications
- Bell, J. F. (1978) 'The development of the Ordnance Survey 1 : 25 000 scale derived map' *The Cartographic Journal* 15: 7–13
- Berry, B. J. L. and Baker, A. M. (1968) 'Geographic sampling' in B. J. L. Berry and D. F. Marble (eds) *Spatial Analysis: A Reader in Statistical Geography* Englewood Cliffs NJ: Prentice-Hall
- Berry, J. K. (1982) 'Cartographic Modelling: procedures for extending the utility of remotely sensed data' in B. F. Richason (ed.) *Remote Sensing: An Input to Geographic Information Systems in the 1980s, Proceedings of the Pecora 7 Symposium, Sioux Falls, S. Dakota, 1981* Falls Church VA: American Society of Photogrammetry
- (1987) 'Fundamental operations in computer-assisted map analysis' *International Journal of GIS* 1, 2: 119–136
- Bertin, J. (1981) *Graphics and Graphic Information Processing* Berlin: Walter de Gruyter
- (1983) 'A new look at cartography' in D. R. F. Taylor (ed.) *Progress in Contemporary Cartography* vol. 2, Chichester: Wiley
- Bickmore, D. P. and Tulloch, T. (1979) 'Medical maps' *Proceedings Auto Carto* 4 vol. 1: 324–331
- Birkin, M. (1995) 'Customer targeting, geodemographics and lifestyle approaches' in P. Longley and G. Clarke (eds) *GIS for Business and Service Planning* Harlow: Longman
- Blakemore, M. (1991) 'Managing an operational GIS: the UK National On-line Manpower Information System (NOMIS)' in D. J. Maguire, M. F. Goodchild and D. W. Rhind (eds) *Geographical Information Systems: Principles and Applications* Harlow: Longman
- Blalock, M. (1964) *Causal Inferences in Nonexperimental Research* University of North Carolina: Chapel Hill
- Boots, B. N. (1986) *Voronoi (Thiessen) Polygons* Concepts and Techniques in Modern Geography 45, Norwich: Geo Books
- Boursier, P. and Faiz, S. (1993) 'A comparative study of relational, extensible and object-oriented approaches for modelling and querying geographic databases' *Proceedings EGIS 93* Utrecht: EGIS Foundation
- Bowman, A. W. (1985) 'A comparative study of some kernel-based non-parametric density estimators' *Journal of Statistical Computation Simulation* 21: 313–327
- Boyle, P. and Dunn, D. (1990) 'Redefining enumeration district centroids and boundaries' Research Report 7, North West Regional Research Laboratory, Lancaster University
- Bracken, I. and Martin, D. (1989) 'The generation of spatial population distributions from census centroid data' *Environment and Planning A* 21: 537–543
- (1995) 'Linkage of the 1981 and 1991 Censuses using surface modelling concepts' *Environment and Planning A* 26, 3: 379–390
- Bracken, I. and Webster, C. (1989a) *Information Technology for Geography and Planning* London: Routledge
- (1989b) 'Towards a typology of geographical information systems' *International Journal of GIS* 3, 2: 137–152
- Brand, M. J. D. (1988) 'The geographical information system for Northern Ireland' *Mapping Awareness* 2, 5: 18–21
- Broome, F. R. and Meixler, D. B. (1990) 'The TIGER database structure' *Cartography and Geographic Information Systems* 17, 1: 39–47
- Brown, P. J. B. (1991) 'Exploring geodemographics' in I. Masser and M. Blakemore

BIBLIOGRAPHY

- (eds) *Handling Geographical Information: Methodology and Potential Applications* Harlow: Longman
- Brusegard, D. and Menger, G. (1989) 'Real data and real problems: dealing with large spatial databases' in M. F. Goodchild and S. Gopal (eds) *Accuracy of Spatial Databases* London: Taylor and Francis
- Bryant, N. A. and Zobrist, A. L. (1982) 'Some technical considerations on the evolution of the IBIS system' in B. F. Richason (ed.) *Remote Sensing: An Input to Geographic Information Systems in the 1980s, Proceedings of the Pecora 7 Symposium* Falls Church VA: American Society of Photogrammetry
- Bundock, M. S. (1987) 'An integrated DBMS approach to geographical information systems' in N. R. Chrisman (ed.) *Proceedings Auto Carto 8* 292-301
- Burrough, P. A. (1986) *Principles of Geographic Information Systems for Land Resources Assessment* Monographs on Soil Resources Survey 12, Oxford: Oxford University Press
- (1994) 'Accuracy and error in GIS' in D. Green and D. Rix (eds) *The AGI Source Book for Geographic Information Systems 1995* London: Association for Geographic Information
- Burrough, P. A. and Boddington, A. (1992) 'The UK Regional Research Laboratory Initiative 1987-1991' *International Journal of GIS* 6, 5: 425-440
- Burton, M. (1989) 'Pinpointing the charge register' *Municipal Journal*, 27 January
- Carstairs, V. and Lowe, M. (1986) 'Small area analysis: creating an area base for environmental monitoring and epidemiological analysis' *Community Medicine* 8, 1: 15-28
- Carstensen, L. W. Jr. (1986) 'Regional land information system development using relational databases and geographic information systems' in M. Blakemore (ed.) *Proceedings Auto Carto London* vol. 1: 507-517
- Carver, S. J. and Brunson, C. F. (1994) 'Vector to raster conversion error and feature complexity: an empirical study using simulated data' *International Journal of GIS* 8, 3: 261-270
- Cassettari, S. (1993) *Introduction to Integrated Geo-Information Management* London: Chapman and Hall
- CEOS (Committee on Earth Observation Satellites) (1992) *The Relevance of Satellite Missions to the Study of the Global Environment* London: CEOS, British National Space Centre
- Chance, A., Newell, R. and Theriault, D. (1990) 'An object-oriented GIS: issues and solutions' in *Proceedings of the First European Conference on Geographic Information Systems* vol. 1, 179-188, Utrecht: EGIS Foundation
- Chen, G. (1986) 'The design of a spatial database management system' in M. Blakemore (ed.) *Proceedings Auto Carto London* vol. 1: 423-432
- Chernoff, H. (1973) 'The use of faces to represent points in k -dimensional space graphically' *Journal of the American Statistical Association* 68, 342: 361-368
- Chorley, R. (1988) 'Some reflections on the handling of geographical information' *International Journal of GIS* 2, 1: 3-9
- Chorley, R. J. and Haggett, P. (1965) 'Trend surface models in geographical research' *Transactions of the Institute of British Geographers* 37: 47-67
- Chrisman, N. R. (1987) 'Efficient digitizing through the combination of appropriate hardware and software for error detection and editing' *International Journal of GIS* 1, 3: 265-277
- (1991) 'The error component in spatial data' in D. J. Maguire, M. F. Goodchild and D. W. Rhind (eds) *Geographical Information Systems: Principles and Applications* Harlow: Longman

BIBLIOGRAPHY

- Chrisman, N. R. and Niemann, B. J. (1985) 'Alternative routes to a multipurpose cadastre' *Proceedings Auto Carto 7* 84-94
- Clarke, K. C. (1990) *Analytical and Computer Cartography* Englewood Cliffs NJ: Prentice-Hall
- Collins, S. H., Moon, G. C. and Lehan, T. H. (1983) 'Advances in geographic information systems' *Proceedings Auto Carto 6* vol. 1: 324-334
- Congalton, R. G. (1986) 'Geographic information systems specialist: a new breed' *Proceedings of Geographic Information Systems Workshop, Atlanta GA* Falls Church VA: American Society for Photogrammetry and Remote Sensing
- Cooke, D. (1989) 'TIGER and the post-GIS era' *GIS World* July/August: 40-55
- Coppock, T. and Anderson, E. (1987) Editorial, *International Journal of GIS* 1, 1: 1-2
- Cressman, G. P. (1959) 'An operational objective analysis system' *Monthly Weather Review* 87, 10: 367-374
- CRU/OPCS/GRO(S) (1980) *People in Britain: A Census Atlas* London, HMSO
- Curran, P. J. (1984) 'Geographic information systems' *Area* 16, 2: 153-158
- (1985) *Principles of Remote Sensing* Harlow: Longman
- (1993) 'Earth observation comes of age' *GIS Europe* 2, 4: 27-31
- Cushnie, J. (1994) 'A British standard is published' *Mapping Awareness* 8, 5: 40-43
- Dale, A. and Marsh, C. (eds) (1993) *The 1991 Census User's Guide* HMSO, London
- Dangermond, J. (1983) 'A classification of software components commonly used in geographic information systems' in D. J. Peuquet and J. O'Callaghan (eds) *Design and Implementation of Computer-based Geographic Information Systems* Amherst, NY: IGU Commission on Geographical Data Sensing and Processing
- Dangermond, J. and Freedman, C. (1987) 'Findings regarding a conceptual model of a municipal database and implications for software design' in W. J. Ripple (ed.) *GIS for Resource Management: A Compendium* Falls Church VA: American Society for Photogrammetry and Remote Sensing
- Dansby, H. B. (1994) 'Access to digital data in US federal agencies' in D. Green and D. Rix (eds) *The AGI Source Book for Geographic Information Systems 1995* London: Association for Geographic Information
- Date, C. J. (1990) *An Introduction to Database Systems* vol. 1, 5th edn, Reading MA: Addison-Wesley
- Dent, B. D. (1985) *Principles of Thematic Map Design* Reading MA: Addison-Wesley
- Department of the Environment (1987) *Handling Geographic Information. The Report of the Committee of Enquiry Chaired by Lord Chorley* London: HMSO
- (1988) *Handling Geographic Information. The Government's Response to the Report of the Committee of Enquiry Chaired by Lord Chorley* London: HMSO
- Devereux, B. J. (1986) 'The integration of cartographic data stored in raster and vector formats' in M. Blakemore (ed.) *Proceedings Auto Carto London* vol. 1: 257-266
- Dickinson, H. J. and Calkins, H. W. (1988) 'The economic evaluation of implementing a GIS' *International Journal of GIS* 2, 4: 307-327
- Diggle, P. H. (1983) *Statistical Analysis of Spatial Point Patterns* London: Academic Press
- Dobson, M. W. (1979) 'Visual information processing during cartographic communication' *The Cartographic Journal* 16: 14-20
- Dorling, D. (1993) 'Map design for census mapping' *The Cartographic Journal* 30, 2: 167-183
- (1994) 'Cartograms for visualizing human geography' in H. M. Hearnshaw and D. J. Unwin (eds) *Visualization in Geographical Information Systems* Chichester: Wiley

BIBLIOGRAPHY

- (1995) 'Visualizing changing social structure from a census' *Environment and Planning A* 26, 3: 353-378
- Doytsher, Y. and Shmutter, B. (1986) 'Intersecting layers of information - a computerized solution' in M. Blakemore (ed.) *Proceedings Auto Carto London* vol. 1: 136-145
- Drury, P. (1987) 'A geographic health information system' *BURISA* 77: 4-5
- Drury, S. A. (1990) *A Guide to Remote Sensing: Interpreting Images of the Earth* Oxford: Oxford University Press
- Dueker, K. J. (1985) 'Geographic information systems: toward a geo-relational structure' *Proceedings Auto Carto 7* 172-177
- (1987) 'Geographic information systems and computer-aided mapping' *APA Journal* Summer 1987: 383-390
- Duggin, M. J., Rowntree, R. A. and Odell, A. W. (1988) 'The application of spatial filtering methods to urban feature analysis using digital image data' *International Journal of Remote Sensing* 9, 3: 543-553
- Dutton, G. (1989) 'Modelling locational uncertainty via hierarchical tessellation' in M. F. Goodchild and S. Gopal (eds) *Accuracy of Spatial Data* London: Taylor and Francis
- Eastman, J. R. (1992) *IDRISI User's Guide Version 4.0 rev 1* Worcester MA: Clark University Graduate School of Geography
- Egbert, S. L. and Slocum, T. A. (1992) 'EXPLOREMAP: an exploration system for choropleth maps' *Annals of the Association of American Geographers* 82, 2: 275
- Epstein, E. F. (1991) 'Legal aspects of GIS' in D. J. Maguire, M. F. Goodchild and D. W. Rhind (eds) *Geographical Information Systems: Principles and Applications* Harlow: Longman
- ESRI (1993a) *Understanding GIS: The Arc/Info Method* Redlands CA: Environmental Systems Research Institute Inc.
- (1993b) *Address Geocoding: Managing Address Information. Arc/Info Users Guide 6.0* Redlands CA: ESRI
- Estes, J. E. (1982) 'Remote sensing and geographic information systems coming of age in the eighties' in B. F. Richason (ed) *Remote Sensing: An Input to Geographic Information Systems in the 1980s*, Proceedings of the Pecora 7 Symposium, Falls Church VA: American Society of Photogrammetry
- Evans, I. S. (1977) 'The selection of class intervals' *Transactions of the Institute of British Geographers* NS 2: 98-124
- Fisher, P. F. (1991) 'Spatial data sources and data problems' in D. J. Maguire, M. F. Goodchild and D. W. Rhind (eds) *Geographical Information Systems: Principles and Applications* Harlow: Longman
- Flowerdew, R. and Goldstein, W. (1989) 'Geodemographics in practice, developments in North America' *Environment and Planning A* 21: 605-616
- Flowerdew, R. and Green, M. (1991) 'Data integration: statistical methods for transferring data between zonal systems' in I. Masser and M. Blakemore (eds) *Handling Geographical Information: Methodology and Potential Applications* Harlow: Longman
- Flowerdew, R. and Openshaw, S. (1987) *A Review of the Problems of Transferring Data from One Set of Areal Units to Another Incompatible Set* Northern RRL Research Report No. 4, Newcastle-upon-Tyne: NRR
- Fotheringham, A. S. and Rogerson, P. A. (1993) 'GIS and spatial analytical problems' *International Journal of GIS* 7, 1: 3-19
- Fotheringham, A. S. and Wong, D. W. S. (1991) 'The modifiable areal unit problem in multivariate statistical analysis' *Environment and Planning A* 23, 7: 1025-1034
- Fox, T. (1990) 'The GIS plotting decision' *Mapping Awareness* 4, 4: 36-37

BIBLIOGRAPHY

- Fraser, S. E. (1984) 'Developments at the Ordnance Survey since 1981' *The Cartographic Journal* 21: 59-61
- Gardiner, V. and Unwin, D. (1985) 'Limitations of microcomputers in thematic mapping' *Computers and Geosciences* 11, 3: 291-295
- Gatrell, A. C. (1988) *Handling Geographic Information for Health Studies* Northern Regional Research Laboratory, Research Report No. 15 Newcastle-upon-Tyne: NRRL
- (1989) 'On the spatial representation and accuracy of address-based data in the United Kingdom' *International Journal of GIS* 3, 4: 335-348
- (1991) 'Concepts of space and geographic data' in D. J. Maguire, M. F. Goodchild and D. W. Rhind (eds) *Geographical Information Systems: Principles and Applications* Harlow: Longman
- Gilbert, C. (1994) 'Portable GPS for mapping: features versus benefits' *Mapping Awareness* 8, 2: 26-29
- Goh, P.-C. (1989) 'A graphic query language for cartographic and land information systems' *International Journal of GIS* 3, 3: 245-255
- Goodchild, M. F. (1984) 'Geocoding and geosampling' in G. L. Gaile and C. J. Willmott (eds) *Spatial Statistics and Models* Dordrecht: D. Reidel
- (1987) 'A spatial analytical perspective on geographical information systems' *International Journal of GIS* 1, 4: 327-334
- (1991a) 'The technological setting of GIS' in D. J. Maguire, M.F. Goodchild and D. W. Rhind (eds) *Geographical Information Systems: Principles and Applications* Harlow: Longman
- (1991b) 'Geographic information systems' *Progress in Human Geography* 15, 2: 194-200
- (1992) 'Geographical information science' *International Journal of GIS* 6, 1: 31-45
- (1994) 'Information highways' in D. Green and D. Rix (eds) *The AGI Source Book for Geographic Information Systems 1995* London: Association for Geographic Information
- Goodchild, M. F. and Dubuc, O. (1987) 'A model of error for choropleth maps, with applications to geographic information systems' in N. R. Chrisman (ed.) *Proceedings Auto Carto 8* 165-174
- Goodchild, M. F. and Gopal, S. (eds) (1989) *Accuracy of Spatial Data* London: Taylor and Francis
- Goodchild, M. F., Haining, R., Wise, S. and 12 others (1992) 'Integrating GIS and spatial data analysis: problems and possibilities' *International Journal of GIS* 6, 5: 407-423
- Goodchild, M. F., Anselin, L. and Deichmann, U. (1993a) 'A framework for the areal interpolation of socioeconomic data' *Environment and Planning A* 25: 383-397
- Goodchild, M. F., Parks, B. O. and Steyaert, L. T. (1993b) (eds) *Environmental Modelling with GIS* Oxford: Oxford University Press
- Gould, M. I. (1992) 'The use of GIS and CAC by health authorities: results from a postal questionnaire' *Area* 24, 4: 391-401
- Green, D. R. and Rix, D. (eds) (1994) *The AGI Source Book for Geographic Information Systems 1995* London: Association for Geographic Information
- Green, N. P. (1987) *Database Design and Implementation* SERRL Working Report No.2, London: SERRL
- Green, N. P., Finch, S. and Wiggins, J. (1985) 'The "state of the art" in geographical information systems' *Area* 17, 4: 295-301

BIBLIOGRAPHY

- Green, P. J. and Sibson, R. (1978) 'Computing Dirichlet tessellations in the plane' *Computer Journal* 21, 2: 168-173
- Gunson, G. (1986) 'Welsh Water beats the information shortage' *Surveyor* 21 August: 18
- Guptill, S. C. (1989) 'Inclusion of accuracy data in a feature-based, object-oriented data model' in M. F. Goodchild and S. Gopal (eds) *Accuracy of Spatial Databases* London: Taylor and Francis
- (1991) 'Spatial data exchange and standardization' in D. J. Maguire, M. F. Goodchild and D. W. Rhind (eds) *Geographical Information Systems: Principles and Applications* Harlow: Longman
- Haggett, P. (1983) *Geography: A Modern Synthesis* Rev. 3rd edn, New York: Harper and Row
- Haines-Young, R. and Green, D. R. (1993) *Landscape Ecology and GIS* London: Taylor and Francis
- Harley, J. B. (1989) 'Deconstructing the map' *Cartographica* 26, 2: 1-20
- Harris, R. (1987) *Satellite Remote Sensing: An Introduction* London: Routledge and Kegan Paul
- Harts, J. J., Ottens, H. F. L. and Scholten, H. J. (1990) 'EGIS '90 and the development and application of geographical information systems in Europe' *Proceedings of the First European Conference on Geographical Information Systems* Utrecht: EGIS Foundation
- Harvey, D. (1969) *Explanation in Geography* London: Edward Arnold
- Hawkins, D. M. and Cressie, N. (1984) 'Robust kriging - a proposal' *Mathematical Geology* 16: 3-18
- Healey, R. G. (1988) 'Interfacing software systems for geographical information systems' *ESRC Newsletter* 63: 23-26
- (1991) 'Database management systems' in D. J. Maguire, M. F. Goodchild and D. W. Rhind (eds) *Geographical Information Systems: Principles and Applications* Harlow: Longman
- Hearnshaw, H. M. and Unwin, D. J. (eds) (1994) *Visualization in Geographical Information Systems* Chichester: Wiley
- Herring, J. R. (1987) 'TIGRIS: Topologically Integrated Geographic Information System' in N. R. Chrisman (ed.) *Proceedings Auto Carto 8* 282-291
- Heywood, I. (1990) 'Commentary: Geographic information systems in the social sciences' *Environment and Planning A* 22: 849-854
- Hirschfield, A., Brown, P. and Bundred, P. (1993) 'Doctors, patients and GIS' *Mapping Awareness* 7, 9: 9-12
- Hodgson, M. E. (1985) 'Constructing shaded maps with the DIME topological structure: an alternative to the polygon approach' *Proceedings Auto Carto 7* 275-282
- Holroyd, F. (1988) 'Image data structures and image processing algorithms' Paper presented to the NERC conference on GIS, Keyworth: NERC
- Hopkins, A. and Maxwell, R. (1990) 'Contracts and quality of care' *British Medical Journal* 300: 919-922
- Hopwood, D. (1989) 'GIS as a marketing tool' *Mapping Awareness* 3, 3: 28-30
- Hoyland, G. and Goldsworthy, D. D. (1986) 'The development of an automated mapping system for the electricity distribution system in the South Western Electricity Board' in M. Blakemore (ed.) *Proceedings Auto Carto London* vol. 2: 171-180
- Hume, J. (1987) 'Postcodes as reference codes' *Applications of Postcodes in Locational Referencing* London: LAMSAC
- Ingram, K. J. and Phillips, W. W. (1987) 'Geographic information processing using

BIBLIOGRAPHY

- a SQL-based query language' in N. R. Chrisman (ed.) *Proceedings Auto Carto 8* 326-335
- Innes, J. E. and Simpson, D. M. (1993) 'Implementing GIS for planning: lessons from the history of technological innovation' *Journal of the American Planning Association* 59, 2: 230-236
- Jackson, M. J. and Woodsford, P. A. (1991) 'GIS data capture hardware and software' in D. J. Maguire, M. F. Goodchild and D. W. Rhind (eds) *Geographical Information Systems: Principles and Applications* Harlow: Longman
- Jarman, B. (1983) 'Identification of underprivileged areas' *British Medical Journal* 286, 6379: 1705-1709
- Jianya, G. (1990) 'Object-oriented models for thematic data management in GIS' *Proceedings of the First European Conference on Geographical Information Systems* Utrecht: EGIS Foundation
- Jungert, E. (1990) 'A database structure for an object-oriented raster-based geographic information system' *Proceedings of the First European Conference on Geographical Information Systems* Utrecht: EGIS Foundation
- Kehoe, B. P. (1994) *Zen and the Art of the Internet* 3rd edn, London: Prentice-Hall
- Kennedy, S. (1989) 'The small number problem and the accuracy of spatial databases' in M. F. Goodchild and S. Gopal (eds) *Accuracy of Spatial Databases* London: Taylor and Francis
- Kennedy, S. and Tobler, W. R. (1983) 'Geographic interpolation' *Geographical Analysis* 15, 2: 151-156
- Kent, M., Jones, A. and Weaver, R. (1993) 'Geographical information systems and remote sensing in land use planning: an introduction' *Applied Geography* 13, 1: 5-8
- Kevany, M. J. (1983) 'Interactive graphics systems in local government mapping: the achievements and challenges' *Proceedings Auto Carto 6* vol. 1: 283-290
- Kinnear, C. (1987) 'The TIGER structure' in N. R. Chrisman (ed.) *Proceedings Auto Carto 8* 249-257
- Kleiner, A. and Brassel, K. (1986) 'Hierarchical grid structures for static geographic data bases' in M. Blakemore (ed.) *Proceedings Auto Carto London* vol. 1: 485-496
- Kollias, V. J. and Voliotis, A. (1991) 'Fuzzy reasoning in the development of geographical information systems. FRIS: a prototype soil information system with fuzzy retrieval capabilities' *International Journal of GIS* 5, 2: 209-224
- Korner, E. (1980) 'The first report to the Secretary of State on the collection and use of information about hospital clinical activity in the National Health Service' Steering Group on Health Services Information in GB, London: HMSO/DHSS
- Lam, A. H. S. (1985) 'Microcomputer mapping systems for local governments' *Proceedings Auto Carto 7*: 327-336
- Lam, N. S. (1983) 'Spatial interpolation methods: a review' *American Cartographer* 10, 2: 129-149
- Land, N. (1989) 'Transfer standards' *Mapping Awareness* 3, 1: 42-43
- Langford, M. and Unwin, D. J. (1994) 'Generating and mapping population density surfaces within a geographical information system' *The Cartographic Journal* 31: 21-26
- Langram, G. (1992) *Time in Geographic Information Systems* London: Taylor and Francis
- Laurini, R. and Thompson, D. (1992) *Fundamentals of Spatial Information Systems* APIC Series 37, London: Academic Press
- Lemmens, J. P. M. (1990) 'Strategies for the integration of raster and vector data' *Proceedings of the First European Conference on Geographical Information Systems* Utrecht: EGIS Foundation

BIBLIOGRAPHY

- Ley, R. G. (1986) 'Accuracy assessment of digital terrain models' in M. Blakemore (ed.) *Proceedings Auto Carto London* vol. 1: 455-464
- Lo, C. P. (1986) *Applied Remote Sensing* Harlow: Longman
- (1989) 'A raster approach to population estimation using high-altitude aerial and space photographs' *Remote Sensing of Environment* 27: 59-71
- Logan, T. L. and Bryant, N. A. (1987) 'Spatial data software integration: merging CAD/CAM/Mapping with GIS and image processing' *Photogrammetric Engineering and Remote Sensing* 53, 10: 1391-1395
- McDowell, T., Meixler, D., Rosenson, P. and Davis, B. (1987) 'Maintenance of geographic structure files at the Bureau of the Census' in N. R. Chrisman (ed.) *Proceedings Auto Carto 8* 264-269
- MacEachran, A. M. and Davidson, J. V. (1987) 'Sampling and isometric mapping of continuous geographic surfaces' *American Cartographer* 14, 4: 299-320
- Maffini, G. (1987) 'Raster versus vector data encoding and handling: a commentary' *Photogrammetric Engineering and Remote Sensing* 53, 10: 1397-1398
- (1990) 'The role of public domain databases in the growth and development of GIS' *Mapping Awareness* 4, 1: 49-54
- Maffini, G., Arno, M. and Bitterlich, W. (1989) 'Observations and comments on the generation and treatment of error in digital GIS data' in M. F. Goodchild and S. Gopal (eds) *Accuracy of Spatial Databases* London: Taylor and Francis
- Maguire, D. J. (1989) *Computers in Geography* Harlow: Longman
- (1991) 'An overview and definition of GIS' in D. J. Maguire, M. F. Goodchild and D. W. Rhind (eds) *Geographical Information Systems: Principles and Applications* Harlow: Longman
- Maguire, D. J. and Dangermond, J. (1994) 'Future GIS technology' in D. Green and D. Rix (eds) *The AGI Source Book for Geographic Information Systems 1995* London: Association for Geographic Information
- Maguire, D. J., Goodchild, M. F. and Rhind, D. W. (eds) (1991) *Geographical Information Systems: Principles and Applications* Harlow: Longman
- Mahoney, R. P. (1991) 'GIS and utilities' in D. J. Maguire, M. F. Goodchild and D. W. Rhind (eds) *Geographical Information Systems: Principles and Applications* Harlow: Longman
- Marble, D. F. and Peuquet, D. J. (1983) 'Geographic information systems and remote sensing' in R. N. Colwell (ed.) *Manual of Remote Sensing* 1: 923-958
- Mark, D. M. (1986) 'The use of quadrees in geographic information systems and spatial data handling' in M. Blakemore (ed.) *Proceedings Auto Carto London* vol. 1: 517-526
- Marshall, C. (1994) 'Survey of publications on GIS, remote sensing and cartography. Part 1: books on GIS' *Mapping Awareness* 8, 7: 40-44
- Martin, D. (1989) 'Mapping population data from zone centroid locations' *Transactions of the Institute of British Geographers* NS 14, 1: 90-97
- (1992) 'Postcodes and the 1991 Census of Population: issues, problems and prospects' *Transactions of the Institute of British Geographers* NS 17, 3: 350-357
- (1993) *The 1991 UK Census of Population Concepts and Techniques in Modern Geography* 56, Norwich: Environmental Publications
- (1995) 'Censuses and the modelling of population in GIS' in P. Longley and G. Clarke (eds) *GIS for Business and Service Planning* Harlow: Longman
- Martin, D. and Bracken, I. (1991) 'Techniques for modelling population-related raster databases' *Environment and Planning A* 23, 1065-1079
- (1994) *1981 and 1991 Population Surface Models: A Guide* CSS 605, University of Manchester Computing Centre, Manchester

BIBLIOGRAPHY

- Martin, D. and Gascoigne, R. (1994) 'Change and change again: geographical implications for intercensal analysis' *Area* 26, 2: 133-141
- Martin, D., Longley, P. and Higgs, G. (1994) 'The use of GIS in the analysis of diverse urban databases' *Computers, Environment and Urban Systems* 18, 1: 55-66
- Marx, R. W. (1990) 'The TIGER system: yesterday, today and tomorrow' *Cartography and Geographic Information Systems* 17, 1: 89-97
- Mason, D. C., Corr, D. G., Cross, A., Hoggs, D. C., Lawrence, D. H., Petrou, M. and Tailor, A. M. (1988) 'The use of digital map data in the segmentation and classification of remotely-sensed images' *International Journal of GIS* 2, 3: 195-215
- Medyckyj-Scott, D. (1994) 'Visualization and human-computer interaction in GIS' in H. M. Hearnshaw and D. J. Unwin (eds) *Visualization in Geographical Information Systems* Chichester: Wiley
- Merchant, J. W. (1982) 'Employing Landsat MSS data in land use mapping: observations and considerations' in B. F. Richason (ed.) *Remote Sensing: An Input to Geographic Information Systems in the 1980s. Proceedings of the Pecora 7 Symposium* Falls Church VA: American Society of Photogrammetry
- Michalak, W. Z. (1993) 'GIS in land use change analysis: integration of remotely sensed data into GIS' *Applied Geography* 13, 1: 28-44
- Moellering, H. (1980) 'Strategies of real-time cartography' *The Cartographic Journal* 17: 12-15
- Mohan, J. and Maguire, D. J. (1985) 'Harnessing a breakthrough to meet the needs of health care' *Health and Social Service Journal* 9 May: 580-581
- Monmonier, M. S. (1982) *Computer-Assisted Cartography. Principles and Prospects* Englewood Cliffs NJ: Prentice-Hall
- (1983) 'Cartography, mapping and geographic information' *Progress in Human Geography* 7: 420-427
- (1991) *How to Lie with Maps* Chicago: University of Chicago Press
- Morphet, C. (1993) The mapping of small-area census data - a consideration of the effects of enumeration district boundaries *Environment and Planning A* 25, 9: 1267-1277
- Morrison, J. L. (1974) 'Observed statistical trends in various interpolation algorithms useful for first stage interpolation' *The Canadian Cartographer*, 11: 142-149
- (1980) 'Computer technology and cartographic change' in D. R. F. Taylor (ed.) *Progress in Contemporary Cartography* vol. 1, Chichester: Wiley
- Mounsey, H. M. (1991) 'Multisource, multinational environmental GIS: lessons learnt from CORINE' in D. J. Maguire, M. F. Goodchild and D. W. Rhind (eds) *Geographical Information Systems: Principles and Applications* Harlow: Longman
- Moxey, A. and Allanson, P. (1994) 'Areal interpolation of spatially extensive variables: a comparison of alternative techniques' *International Journal of GIS* 8, 5: 479-487
- Muehrcke, P. (1969) 'Visual Pattern Analysis: A Look at Maps' Unpublished PhD Thesis, University of Michigan
- NCGIA (1989) 'The research plan of the National Center for Geographic Information and Analysis' *International Journal of GIS* 3, 2: 117-136
- (1992) 'National Center for Geographical Information and Analysis: Publications list' *International Journal of GIS* 6, 1: 47-52
- Newcomer, J. A. and Szajin, J. (1984) 'Accumulation of thematic map errors in digital overlay analysis' *American Cartographer* 11, 1: 58-62
- Niemann, O. (1993) 'Automated forest cover mapping using Thematic Mapper images and ancillary data' *Applied Geography* 13, 1: 86-95
- Norcliffe, G. B. (1969) 'On the uses and limitations of trend surface models' *Canadian Geographer* 13: 338-348

BIBLIOGRAPHY

- Nordbeck, S. and Rystedt, B. (1970) 'Isarithmic maps and the continuity of reference interval functions' *Geografiska Annaler* 52B: 92-123
- (1972) *Computer Cartography* Lund: Carl Bloms Boktryckeri
- Oakes, J. and Thrift, N. (1975) 'Spatial interpolation of missing data: an empirical comparison of some different methods' *Computer Applications*, 2, 3/4: 335-356
- OPCS (1986) *Population and Vital Statistics: Local and Health Authority Area Summary 1984* Fareham: OPCS
- (1992a) *1991 Census Definitions Great Britain* CEN 91 DEF, London: OPCS
- (1992b) *ED/Postcode Directory: Prospectus 1991 Census User Guide* 26, Fareham: OPCS
- (1993) *Report on Review of Statistical Information on Population and Housing (1996-2016)* Occasional Paper 40, London: OPCS
- Openshaw, S. (1984) *The Modifiable Areal Unit Problem Concepts and Techniques in Modern Geography* 38, Norwich: Geo Books
- (1988) 'An evaluation of the BBC Domesday interactive videodisc as a GIS for planners' *Environment and Planning B* 15: 325-328
- (1989) 'Learning to live with errors in spatial databases' in M. F. Goodchild and S. Gopal (eds) *Accuracy of Spatial Databases*, London: Taylor and Francis
- (1990) 'Spatial referencing for the user in the 1990s' *Mapping Awareness* 4, 2: 24-29
- (1991a) 'A view on the GIS crisis in geography, or, using GIS to put Humpty-Dumpty back together again' *Environment and Planning A* 23: 621-628
- (1991b) 'Developing appropriate spatial analysis methods for GIS' in D. J. Maguire, M. F. Goodchild and D. W. Rhind (eds) *Geographical Information Systems: Principles and Applications* Harlow: Longman
- (1995) 'Marketing spatial analysis: some prospects and technologies of relevance to marketing' in P. Longley and G. Clarke (eds) *GIS for Business and Service Planning* Harlow: Longman
- Openshaw, S. and Taylor, P. J. (1981) 'The modifiable areal unit problem' in N. Wrigley and R. J. Bennett (eds) *Quantitative Geography: A British View* London: Routledge and Kegan Paul
- Openshaw, S., Cullingford, D. and Gillard, A. (1980) 'A critique of the national classifications of OPCS/PRAG' *Town Planning Review* 51: 421-439
- Openshaw, S., Charlton, M., Wymer, C. and Craft, A. (1987) 'A mark 1 geographical analysis machine for the automated analysis of point data sets' *International Journal of GIS* 1: 335-358
- Ordnance Survey (1993) *ADDRESS-POINT User Guide* Southampton: Ordnance Survey
- Owen, D. W., Green, A. E. and Coombes, M. G. (1986) 'Using the social and economic data on the BBC Domesday disc' *Transactions of the Institute of British Geographers* NS 11: 305-314
- Parrott, R. and Stutz, F. P. (1991) 'Urban GIS applications' in D. J. Maguire, M. F. Goodchild and D. W. Rhind (eds) *Geographical Information Systems: Principles and Applications* Harlow: Longman
- Pearman, H. (1993) 'Designing a land and property gazetteer' *Mapping Awareness* 7, 5: 19-21
- Petrie, G. (1989) 'Networking for digital mapping' *Mapping Awareness* 3, 3: 9-16
- Peucker, T. K. and Chrisman, N. (1975) 'Cartographic data structures' *The American Cartographer* 2: 55-69
- Peucker, T. K., Fowler, R. J., Little, J. J. and Mark, D. M. (1978) 'The Triangulated Irregular Network' *Proceedings of the DTM Symposium* Falls Church VA: American Congress on Surveying and Mapping

BIBLIOGRAPHY

- Peuquet, D. J. (1981a) 'An examination of techniques for reformatting digital cartographic data/ Part 1: the raster-to-vector process' *Cartographica* 18, 1: 34-48
- (1981b) 'An examination of techniques for reformatting digital cartographic data/ Part 2: the vector-to-raster process' *Cartographica* 18, 3: 21-33
- Piowar, J. M., Ellsworth, F. L. and Dudycha, D. J. (1990) 'Integration of spatial data in vector and raster formats in a geographical information system environment' *International Journal of GIS* 4, 4: 429-444
- Plane, D. A. and Rogerson, P. A. (1994) *The Geographical Analysis of Population with Applications to Planning and Business* New York: Wiley
- Post Office (1985) *The Postcode Address File Digest* London: The Post Office
- Pugh, D. (1992) 'The National Land and Property Gazetteer' *Mapping Awareness* 6, 5: 32-45
- Raper, J. F., Rhind, D. W. and Shepherd, J. W. (1992) *Postcodes: The New Geography* Harlow: Longman
- Rase, W.-D. (1987) 'The evolution of a graduated symbol software package in a changing graphics environment' *International Journal of GIS* 1, 1: 51-66
- Rhind, D. W. (1977) 'Computer-aided cartography' *Transactions of the Institute of British Geographers* NS 2, 1: 71-97
- (1983) 'Mapping census data' in D. W. Rhind (ed.) *A Census Users Handbook* London: Methuen
- (1986) 'Remote sensing, digital mapping, and geographic information systems: the creation of national policy in the UK' *Environment and Planning C* 4, 1: 91-102
- (1987) 'Recent developments in geographical information systems in the UK' *International Journal of GIS* 1, 3: 229-242
- (1988) 'A GIS research agenda' *International Journal of GIS* 2, 1: 23-28
- (1991) 'Counting the people: the role of GIS' in D. J. Maguire, M. F. Goodchild and D. W. Rhind (eds) *Geographical Information Systems: Principles and Applications* Harlow: Longman
- (1992) 'Data access, charging and copyright and their implications for geographical information systems' *International Journal of GIS* 6, 1: 13-30
- (1993) 'Policy on the supply and availability of Ordnance Survey information over the next five years' *Mapping Awareness* 7, 1: 37-41
- (1994) 'Spatial data from government' in D. Green and D. Rix (eds) *The AGI Source Book for Geographical Information Systems 1995* London: Association for Geographic Information
- Rhind, D. W. and Green, N. P. A. (1988) 'Design of a geographical information system for a heterogeneous scientific community' *International Journal of GIS* 2, 3: 171-189
- Rhind, D. W. and Mounsey, H. (1986) 'The land and people of Britain: a Domesday record, 1986' *Transactions of the Institute of British Geographers* NS 11: 315-325
- Rhind, D. W. and Openshaw, S. (1987) 'The BBC Domesday system: a nation-wide GIS for \$4448' in N. R. Chrisman (ed.) *Proceedings Auto Carto 8* 595-603
- Rhind, D. W., Adams, T., Fraser, S. E. G. and Elston, M. (1983) 'Towards a national digital topographic database: experiments in mass digitising, parallel processing and the detection of change' *Proceedings Auto Carto 6* vol. 1: 428-437
- Rix, D. (1994) 'Recent trends in GIS technology' in D. Green and D. Rix (eds) *The AGI Source Book for Geographic Information Systems 1995* London: Association for Geographic Information
- Robbins, R. G. and Thake, J. E. (1988) 'Coming to terms with the horrors of automation' *The Cartographic Journal* 25: 139-142
- Robinson, A. (1987) *Elements of Cartography* 5th edn, New York: Wiley

BIBLIOGRAPHY

- Robinson, A. H. and Petchenik, B. B. (1975) 'The map as a communication system' *The Cartographic Journal* 12, 1: 7-14
- Rose, M. T. (1992) *The Internet Message: Closing the Book with Electronic Mail* London: Prentice-Hall
- Sacker, D. (1987) 'Value added postcode services. The SIA experience' in *Applications of Postcodes in Locational Referencing* London: LAMSAC
- Sadler, G. J. and Barnsley, M. J. (1990) 'Use of population density data to improve classification accuracies in remotely-sensed images of urban areas' *Proceedings of the First European Conference on Geographical Information Systems* Utrecht: EGIS Foundation
- Sadler, G. J., Barnsley, M. J. and Barr, S. L. (1991) 'Information extraction from remotely sensed images for urban land analysis' in *Proceedings of the Second European Conference on Geographical Information Systems* vol. 2: 955-964, Utrecht: EGIS Foundation
- Sandhu, J. S. and Amundson, S. (1987) *The Map Analysis Package for the PC* Buffalo: State University of New York at Buffalo
- Schmid, C. F. and MacCannell, E. H. (1955) 'Basic problems, techniques, and theory of isopleth mapping' *Journal of the American Statistical Association* 50: 220-239
- Shepard, D. S. (1984) 'Computer mapping: the Sympap interpolation algorithm' in G. L. Gaile and C. J. Willmott (eds) *Spatial Statistics and Models* Dordrecht: D. Reidel
- Shiryaev, E. E. (1987) *Computers and the Representation of Geographical Data* (Translated from Russian) Chichester: Wiley
- Sibson, R. (1981) 'A brief description of natural neighbour interpolation' in V. Barnett (ed.) *Interpreting Multivariate Data* Chichester: Wiley
- Siderelis, K. C. (1991) 'Land resource information systems' in D. J. Maguire, M. F. Goodchild and D. W. Rhind (eds) *Geographical Information Systems: Principles and Applications* Harlow: Longman
- Smith, D. A. and Tomlinson, R. F. (1992) 'Assessing costs and benefits of geographical information systems: methodological and implementation issues' *International Journal of GIS* 6, 3: 247-256
- Smith, P. (1988) 'Developments in the use of digital mapping in HM Land Registry' *Mapping Awareness* 2, 4: 37-41
- Smith, W. (1990) 'Mapping Awareness '90. Conference chairman's address' *Mapping Awareness* 4, 2: 11-13
- Statistics Canada (1992) *1991 Geography Catalogue* Ottawa: Statistics Canada
- Sui, D. Z. (1994) 'GIS and urban studies: positivism, post-positivism, and beyond' *Urban Geography* 15, 3: 258-278
- Taylor, P. J. and Overton, M. (1991) 'Further thoughts on geography and GIS' *Environment and Planning A* 23: 1087-1094
- Teng, A. T. (1983) 'Cartographic and attribute database creation for planning analysis through GBF/DIME and census data processing' in M. Blakemore (ed.) *Proceedings Auto Carto 6* vol. 2: 348-354
- (1986) 'Polygon overlay processing: a comparison of pure geometric manipulation and topological overlay processing' *Proceedings, Second International Symposium on Spatial Data Handling, Seattle, Washington* 102-119
- Thrall, G. I. and Elshaw Thrall, S. (1993) 'Commercial data for the business GIS' *Geo Info Systems* July/August 63-68
- (1994) 'Business GIS data, part 3: ZIP Plus 4 geocoding' *Geo Info Systems* January 57-60

BIBLIOGRAPHY

- Tobler, W. R. (1967) 'Of maps and matrices' *Journal of Regional Science* 17, 2 (supplement): 275-280
- (1973) 'Choropleth maps without class intervals?' *Geographical Analysis* 5: 262-265
- (1979) 'Smooth pycnophylactic interpolation for geographical regions' *Journal of the American Statistical Association* 74, 367: 519-530
- Tobler, W. R. and Kennedy, S. (1985) 'Smooth multidimensional interpolation' *Geographical Analysis* 17, 3: 251-257
- Tomlin, C. D. (1990) *Geographic Information Systems and Cartographic Modelling* Englewood Cliffs NJ: Prentice-Hall
- (1991) 'Cartographic modelling' in D. J. Maguire, M. F. Goodchild and D. W. Rhind (eds) *Geographical Information Systems: Principles and Applications* Harlow: Longman
- Tomlin, C. D. and Berry, J. K. (1979) 'A mathematical structure for cartographic modelling in environmental analysis' *Proceedings of the American Congress on Surveying and Mapping*, Falls Church VA: American Congress on Surveying and Mapping
- Tomlinson, R. F. (1987) 'Current and potential uses of geographical information systems: the North American experience' *International Journal of GIS* 1, 3: 203-218
- Tomlinson, R. F., Calkins, H. W. and Marble, D. F. (1976) *Computer Handling of Geographical Data* Paris: UNESCO Press
- Trotter, C. M. (1991) 'Remotely-sensed data as an information source for geographical information systems in natural resource management: a review' *International Journal of GIS* 5, 2: 225-239
- Tsai, V. J. D. (1993) 'Delaunay triangulations in TIN creation: an overview and linear-time algorithm' *International Journal of GIS* 7, 6: 501-524
- Tufte, E. R. (1990) *Envisioning Information* Cheshire CT: Graphics Press
- Unwin, D. (1981) *Introductory Spatial Analysis* London: Methuen
- (1989) *Curriculum for Teaching Geographical Information Systems* Report to the Education Trust Fund of AUTOCARTO, Royal Institute of Chartered Surveyors, Leicester: University of Leicester
- Unwin, T. (1992) *The Place of Geography* Harlow: Longman
- van der Knaap, W. G. M. (1992) 'The vector to raster conversion: (mis)use in geographical information systems' *International Journal of GIS* 6, 2: 159-171
- Veregin, H. (1989) 'Error modelling for the map overlay operation' in M. F. Goodchild, M. and S. Gopal (eds) *Accuracy of Spatial Databases* London: Taylor and Francis
- Vicars, D. (1986) 'Mapdigit - a digitizer interface to GIMMS' *GIMMS Newsletter* 3: 8-9
- Visvalingham, M. (1989) 'Cartography, GIS and maps in perspective' *The Cartographic Journal* 26: 25-32
- (1994) 'Visualisation in GIS, cartography and ViSC' in H. M. Hearnshaw and D. J. Unwin (eds) *Visualization in Geographical Information Systems* Chichester: Wiley
- Walker, W., Palimaka, J. and Halustchak, O. (1986) 'Designing a commercial GIS - a spatial relational database approach' *Proceedings of GIS Workshop, Atlanta, GA* Falls Church VA: American Society for Photogrammetry and Remote Sensing
- Wang, B. (1986) 'A method to compress raster map data files for storage' in M. Blakemore (ed.) *Proceedings Auto Carto London* vol. 1: 272-281
- Webber, R. J. (1980) 'A response to the critique of the OPCS/PRAG national classifications' *Town Planning Review* 51: 440-450
- Webster, C. (1988) 'Disaggregated GIS architecture. Lessons from recent

BIBLIOGRAPHY

- developments in multi-site database management systems' *International Journal of GIS* 2, 1: 67-80
- (1990) *Approaches to Interfacing GIS and Expert System Technologies* Technical Reports in Geo-Information Systems, Computing and Cartography 22, Cardiff: Wales and South West Regional Research Laboratory
- Wehde, M. (1982) 'Grid cell size in relation to errors in maps and inventories produced by computerized map processing' *Photogrammetric Engineering and Remote Sensing* 48, 8: 1289-1298
- Weibel, R. and Heller, M. (1991) 'Digital terrain modelling' in D. J. Maguire, M. F. Goodchild and D. W. Rhind (eds) *Geographical Information Systems: Principles and Applications* Harlow: Longman
- Wells, D. and 11 others (1986) *Guide to GPS Positioning* Ottawa: Canadian GPS Associates
- Whitelaw, J. (1986) 'Maps screen Welsh mains' *New Civil Engineer* 3 July: 23
- Wiggins, L. L. (1986) 'Three low-cost mapping packages for microcomputers' *APA Journal* Autumn: 480-488
- Wilson, P. R. and Elliott, D. J. (1987) 'An evaluation of the Postcode Address File as a sampling frame and its use within OPCS' *Journal of the Royal Statistical Society A* 150: 230-240
- Wood, D. (1993) *The Power of Maps* London: Routledge
- Wood, M. (1994) 'The traditional map as a visualization technique' in H. M. Hearnshaw and D. J. Unwin (eds) *Visualization in Geographical Information Systems* Chichester: Wiley
- Wood, M. and Brodlie, K. (1994) 'ViSC and GIS: some fundamental considerations' in H. M. Hearnshaw and D. J. Unwin (eds) *Visualization in Geographical Information Systems* Chichester: Wiley
- Worboys, M. (1994) 'Object-oriented approaches to geo-referenced information' *International Journal of Geographical Information Systems* 8, 4: 385-399
- Wrigley, N. (1990) 'ESRC and the 1991 Census' *Environment and Planning A* 22: 573-582
- (1991) 'Market-based systems of health-care provision, the NHS bill, and geographical information systems' *Environment and Planning A* 23: 5-8
- Wyatt, B. K., Briggs, D. and Mounsey, H. M. (1988) 'An information system on the state of the environment in the European Community' in H. M. Mounsey and R. F. Tomlinson (eds) *Building Databases for Global Science* London: Taylor and Francis
- Yoeli, P. (1982) 'Cartographic drawing with computers' *Computer Applications* 8 University of Nottingham.
- (1983) 'Digital terrain models and their cartographic and cartometric utilisation' *The Cartographic Journal*, 20, 1: 17-22
- (1986) 'Computer executed production of a regular grid of height points from digital contours' *The American Cartographer* 13, 3: 219-229
- Young, J. A. T. (1986) *A UK Geographic Information System for Environmental Monitoring, Resource Planning and Management Capable of Integrating and Using Satellite Remotely Sensed Data* Monograph 1, Nottingham: The Remote Sensing Society
- Zobrist, A. L. (1979) 'Data structures and algorithms for raster data processing' *Proceedings Auto Carto 4* vol. 1: 127-137