

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed for Form Page 2.
Follow the sample format on preceding page for each person. **DO NOT EXCEED FOUR PAGES.**

NAME		POSITION TITLE	
Gerard Rushton		Professor	
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
The University of Wales, Aberystwyth, U.K.	B.A.	1959	Geography & Anthropology
The University of Wales, Aberystwyth, U.K.	M.A.	1962	Geography
The University of Iowa, Iowa City, IA	Ph.D.	1964	Geography

A. Positions and Honors**Professional Experience**

1964-1967	Assistant Professor, Department of Geography, McMaster University, Ontario Canada
1967-1969	Assistant Professor, Department of Geography, and Computer Institute for Social Science Research, Michigan State University, East Lansing, MI
1969-1974	Associate Professor, Department of Geography, The University of Iowa, Iowa City, IA
1974-Present	Professor, Department of Geography, and (1998) Adjunct Professor, College of Public Health, The University of Iowa, Iowa City, IA
1975-1978	Director, Health Services Research Center, The University of Iowa, Iowa City, IA
1990-1992	Birch Foundation Endowed Chair in Geographic Studies, San Diego State University, San Diego, CA

Honors

1985-1987	Elected Honors Committee, Association of American Geographers
1998	Honors for Distinguished Scholarship in Geography, Association of American Geographers. "For scholarly contributions to geographical theory and practice concerning revealed space preference, location-allocation modeling, and GIS-related decision support systems, and for applied research in community planning and facility location throughout the world."
1999	Elected, Chairman, Nominations Committee, Association of American Geographers
2000	Appointed, Collegiate Fellow, College of Liberal Arts, The University of Iowa

Professional Experience

1989-1992	Member, Board of Directors, National Center for Geographic Information and Analysis
1990-1993	Member, Mapping Science Committee, National Research Council
1993-1996	Member, Rediscovering Geography Committee, National Research Council
1996-1999	Member, National Cancer Inst., Div. of Cancer Epidemiology & Genetics, GIS Subcommittee
1998-1999	Member, National Cancer Institute's Surveillance Implementation Group
1999	Member, National Institute of Environmental Health Sciences (NIH), Special Emphasis Panel (Superfund Hazardous Substances Basic Research Program); NIH, Centers for Population Health and Health Disparities, 2003.
1999-2003	Member, NIH Review Group for Small Business Innovation Research Grant Applications
1999-Present	Chairman, Oversight Committee, NCI, GIS Project, Long Island Breast Cancer Study
Current	Editorial Board Memberships: <i>Annals</i> , <i>Assn. American Geographers</i> , (2002-), <i>Journal of Geographical Systems</i> (1993-); <i>International Regional Science Review</i> (1995-); <i>Journal of Regional Science</i> (1996-); <i>Journal of the Urban and Regional Information Systems Association</i> , (1999-); <i>Social Science & Medicine</i> (1999-)

B. Selected peer-reviewed publications**Representative Earlier Publications**

Henderson, W.G., G.J. Meneley, J.A. Kohler, and G. Rushton (1977). "A Statistical Model of Changes in Locations of Primary-Care Dentists in a Rural State." *Jn. Public Health Dentistry*, 37, No. 3, 189-200.

- Meneley, G.J., A. Ghosh and G. Rushton (1979). "A State-Wide Computerized Algorithm for Implementing Shortage Area Criteria," in *Compendium of Papers, Third Annual Data User's Conference, National Center for Health Statistics, Washington, D.C.*
- Meneley, G.J. and G. Rushton (1980). "Mapping the Predicted Need for Hospital Beds," in *Proceedings of the International Symposium on Cartography and Computing: Applications in Health and Environment, Vol. 1, (Ed. R.T. Aangeenbrug), pp. 353-359, American Congress on Surveying and Mapping.*
- Rushton, G. and S.L. McLafferty (1980). "Locational Analysis for Child Welfare," in J.L. Craft, S.W. Epley and W.M. Theisen, Eds. *Child Welfare Forecasting*, Charles C. Thomas Pub., Springfield, Illinois, pp. 128-142.
- Rushton, G. (1984). "Use of Location-Allocation Models for Improving the Geographical Accessibility of Rural Services in Developing Countries." *International Regional Science Review*, 9, 217-240.
- Ghosh, A., and G. Rushton, (Eds.) (1987). *Spatial Analysis and Location-Allocation Models*, Van Nostrand Reinhold Company, Inc., New York, (x + 373 pp.).
- Ayeni, M.A., G. Rushton, and M.L. McNulty (1987). "Improving the Geographical Accessibility of Health Care in Rural Areas: A Nigerian Case Study." *Social Science and Medicine*, 25, 1083-1094.
- Rushton, G. (1989). "Applications of Location Models," *Annals of Operations Research*, 18, 25-42.
- Densham, P.J., and G. Rushton (1992). "Strategies for Solving Large Location-Allocation Problems by Heuristic Methods." *Environment and Planning A*, 24, 289-304.
- Armstrong, M.P., P.J. Densham, P. Lolonis and G. Rushton (1992). "Cartographic Displays to Support Locational Decision Making." *Cartography and Geographic Information Systems*. 19, 154-164.
- Densham, P.J., and G. Rushton (1992). "A More Efficient Heuristic for Solving Large P-Median Problems." *Papers in Regional Science: The Journal of the Regional Science Association International*, 71, 307-329.

Recent Publications

- Densham, P.J., and G. Rushton (1995). "Providing Spatial Decision Support for Rural Service Facilities that Require a Minimum Workload." *Environment and Planning, B* 15:1907-1919.
- Rushton, G., M.P. Armstrong and P. Lolonis (1995). "Small Area Student Projections Based on a Modifiable Spatial Filter." *Socio-Economic Planning Sciences* 29:169-185.
- Rushton, G. and P. Lolonis (1995). "Exploratory Spatial Analysis of Birth Defect Rates in an Urban Area." *Statistics in Medicine* 15:717-726.
- Rushton, G., R. Krishnamurthy, D. Krishnamurti, P. Lolonis and H. Song (1996). "The Spatial Relationship Between Infant Mortality and Birth Defect Rates in a U.S. City." *Statistics in Medicine* 15, 1907-1919.
- Densham, P.J., and G. Rushton (1996). "Providing Spatial Decision Support for Rural Service Facilities that Require a Minimum Workload." *Environment and Planning B* 23, 553-574.
- Chakraborty, J., and G. Rushton (1998). "Projecting Grade-Specific Enrollments for School Catchment Areas: An Evaluation of Two Methods." *Applied Geographic Studies* 2, 157-175.
- Rushton, G. (1998). "Improving the Geographic Basis of Health Surveillance Using GIS." in M. Loytonen and A. Gatrell, eds., *GIS and Health*, Taylor & Francis, London, pp. 63-79.
- Francis, R.L., T.J. Lowe, G. Rushton and M.B. Rayco (1999). "A Synthesis of Aggregation Methods for Multi-Facility Location Problems: Strategies for Containing Error." *Geographical Analysis* 31 (1), 67-87. Erratum, p. 215.
- Rushton, G. (1999). "Methods to Evaluate Geographic Access to Health Services." *Journal of Public Health Management and Practice* 5 (2), 93-100.
- Armstrong, M.P., G. Rushton and D.L. Zimmerman (1999). "Geographically Masking Health Data to Preserve Confidentiality." *Statistics in Medicine* 18, 497-525.
- Richards, T.B., C.M. Croner, G. Rushton, C.K. Brown, and L. Fowler (1999). "Geographic Information Systems and Public Health: Mapping the Future." *Public Health Reports* 114, 359-373.
- Rushton, G., and M. West. (1999) "Women with localized breast cancer selecting mastectomy treatment, Iowa, 1991-1996." *Public Health Reports* 114(4):370-1.
- Rushton, G. (2000). "GIS to Improve Public Health: Guest Editorial." *Transactions in GIS* 4, 1-4.
- G. Rushton, G. Elmes and R. McMaster. (2000) "Consideration for Improving Geographic Information System Research in Public Health." *Journal of the Urban and Regional Information Systems Association* 12(2):31-49.
- Rushton, G. (2003) "Public health, GIS, and spatial analytic tools," *Annual Review of Public Health* 24:43-56. Available at <http://pubhealth.annualreviews.org/cgi/content/full/24/1/43?ijkey=OCdCbZl0j>

C. Research Support**Ongoing Research Support**

Rushton, G.

(Rushton, Gerard)	06/30/02-06/30/03	5%
National Cancer Institute (SEER U. of Iowa Project)	\$104,000	
Development of High Resolution Population Distribution Data to Enhance Cancer Prevention and Control Research		

This project is with the GIS group from the Oak Ridge National Laboratory.

1 R01 CA95961-01 (Rushton, Gerard)	05/01/02-04/30/05	20%
National Cancer Institute	\$444,421 (for first year)	
A GIS Based Workbench to Interpret Cancer Maps		

The specific aims of this research are to refine and evaluate spatial analytic methods to identify regions of excess cancer burden for breast and colorectal cancer. Methodological development will combine spatial analysis with statistical models from the family of logistic regression models. Geographical measures of access computed within a geographic information systems (GIS) framework will be incorporated into logistic models. GIS also provides the framework for developing and testing geographical feature extraction methods to determine anomalous regions of extreme cancer burden.

Contract #5883CA02 (Rushton, Gerard)	02/01/03-09/30/03	5%
Iowa Department of Public Health	\$504,340	
Comprehensive Assessment of Rural Health in Iowa (CARHI)		

Completed Research Support

(Rushton, Gerard)	02/01/01-01/31/02	7%
University Consortium on Geographic Information Science	\$40,000	
Instructional Modules for Urban Health Indicators in Developing Countries		

Develop web-based instructional modules for spatial analysis of health data in typical urban areas of developing countries.

(Rushton, Gerard)	06/15/01-09/04/01	2%
Centers for Disease Control	\$2,490	

To develop a "Geographical Science and Data" training session to be held September 4, 2001 in Atlanta, Georgia as part of the Centers for Disease Control and Prevention 2001 Cancer Conference.