

Lee De Cola

DATA to *Insight*

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DATA to Insight is a consulting and training enterprise that fosters clear and effective standards for the visualization of measurement, temporal, and spatial data.

EDUCATION

Ph.D., Geography 1984 University of Ibadan, Nigeria. Dissertation: “A crossnational analysis of urban concentration, with particular reference to urbanization in Africa,” 343 pp.

Course work for the Ph.D. in Economics and Planning, Massachusetts Institute of Technology 1971-1974.

Master of City Planning 1969 University of California, Berkeley, specialization in systems and quantitative methods in planning.

B.A., Mathematics 1967 University of California, Berkeley, “with distinction in general scholarship.”

Certificate, 2017, Survey of Music Technology by Georgia Institute of Technology on Coursera.

RESEARCH AND ACADEMIC APPOINTMENTS

2022 – present, Instructor, The Osher Lifelong Learning Institute at George Mason University: multi-day classes on global change, data analysis, and aging.

2010 – 2018, Adjunct Instructor, University of Maryland Baltimore County, Shady Grove, MD: Professional seminars in analysis of time, spatial analysis, data visualization and health geography.

1989 – 2010 Research Physical Scientist, U.S. Geological Survey, Reston, VA:

- Environmental spatial analysis and forecasting.
- Spatial analysis of health and health services.
- Historically Black Colleges and Universities outreach and training.

2012 – 2014, Northern Virginia Community College, Geospatial Studies, Reston VA: Spatial analysis.

2010 – 2012, Virginia Tech, West Falls Church VA: Data structures in geographic information systems (GIS).

2008–2009 Adjunct Instructor, Johns Hopkins University Program in Environmental Sciences and Policy, teaching GIS online.

2005 Visiting Adjunct Associate Professor, School of Foreign Service, Georgetown University, taught GIS: Health and Environment.

1989–90 National Research Council Postdoctoral Research Associate, U.S. Geological Survey, Reston, Virginia.

1986–89 Assistant Professor of Geography, University of Vermont, Burlington, Vermont. Courses in economic geography, industrial location, regional development and planning, spatial analysis, the geography of Africa, and fractals in geography.

1985–86 Visiting Assistant Professor of Geography and Research Associate, Regional Research Institute, West Virginia University, Morgantown, West Virginia. Courses on urban and population geography and on computers. Research on energy and industrial location.

1984–85 Lecturer in Urban and Regional Planning, School of Urban and Regional Planning, University of Southern California, Los Angeles. Courses in statistics and data analysis in planning.

1978–84 Lecturer, Department of Political Science, University of Ibadan, Nigeria. Graduate and undergraduate courses in social statistics, research methods, public policy analysis, and urban management.

1974–78 Lecturer, Department of Urban Affairs and Planning, Boston University. Graduate courses in urban research methods, models in planning, and computers in planning.

PROFESSIONAL EXPERIENCE

1985 Statistical Analyst, Southern California Rapid Transit District, Los Angeles. Conducted spatial analysis of scheduling problems.

1984 Consultant to Center for Population and Family Health, Faculty of Medicine, Columbia University, New York. Provided data on health delivery sites in Ibadan, Nigeria.

1980–84 Computer Consultant to Medical Library, University of Ibadan College of Medicine. Data management, programming, and text layout of a 4000-item bibliography: *Three decades of medical research* (Ibadan: Ibadan University Press 1984), 208 pp.

1977–78 Consultant to Boston University African Studies Center. Data management and analysis of survey research.

1976–78 Chief Technical Planner, Massachusetts Department of Mental Health, Boston. Conducted policy research, information system development, service modeling.

1974–75 Consultant, U.S. Department of Housing and Urban Development, Boston. Housing policy research.

1969–71 Senior Staff Member, Marshall Kaplan, Gans and Kahn, Chicago and Boston. Responsible for monitoring Model Cities planning progress in four cities.

SELECTED REFEREED PUBLICATIONS (see ldecola.net for PDFs)

Lee De Cola 2010 “A network representation of raster land cover patches” *Photogrammetric Engineering and Remote Sensing* 76(1), 61-72. Received ESRI First Place Award for Best Scientific Paper in Geographic Information Systems

Lee De Cola 2002 “Spatial forecasting of disease risk and uncertainty” *Cartography and Geographic Information Science* 29(4):363-380.

Keith Reynolds, Bjork J., Riemann-Hershey R., Schmoldt D. Payne J. King S. Moeur M. De Cola L. Twery M. Cunningham P 1999, “Decision Support for Ecosystem Management” in Sexton, W. T. et al eds., *Ecological stewardship: a common reference for ecosystem management*: Oxford: Elsevier Science, 687-721.

Lee De Cola 1996 “Coins, trees, bars and bells: simulation of the binomial process” *Mathematica in Education and Research* 5(2):17-22.

Lee De Cola 1996 “Multiresolution covariation among Landsat and AVHRR vegetation indices” in Dale Quattrochi and Michael Goodchild, eds., *Scaling of remote sensing data for GIS*, Chelsea MI: Lewis Publishers pp. 73-91.

- Lee De Cola 1994 "Simulating and mapping spatial complexity using multiscale techniques" *International Journal of Geographical Information Systems*, 8(5):411-427.
- David Kirtland, Leonard Gaydos, Keith Clarke, Lee De Cola, William Acevedo, and Cindy Bell 1994 "An analysis of human-induced land transformations in the San Francisco Bay and Sacramento Area" *World Resource Review*, 6(2):206-217
- Nina Lam and Lee De Cola, eds. 1993 *Fractals in geography*. Englewood Cliffs NJ: Prentice-Hall.
- Lee De Cola and Nalan Montagne 1993 "The Pyramid system for multiscale raster analysis" *Computers & Geosciences*, 19(10): 1393-1404.
- Lee De Cola 1991 "Fractal analysis of multiscale spatial autocorrelation among point data," *Environment and Planning A*, 23:545-556.
- Lee De Cola 1989 "Fractal analysis of a classified Landsat scene," *Photogrammetric Engineering and Remote Sensing*, 55(5):601-612.
- Lee De Cola 1989 "Pareto and fractal description of regions from a binomial lattice," *Geographical Analysis*, 21(1):74-81.
- Katherine DiDomenico, Lee De Cola and Jennifer Leishmann 1987 "Urban Yoruba mothers: at home and at work," in Christine Oppong, ed. *Sex roles, population, and development in West Africa* (Portsmouth NH: Heinemann), pp.118-132.
- Lee De Cola 1986 "Urban concentration in Africa," *African Urban Quarterly*, 1(3):176- 190.
- Lee De Cola 1985 "Lognormal estimates of macro-regional city size distributions, 1950-1970," *Environment and Planning A*, 17:1637-1652.
- Lee De Cola 1984 "Statistical determinants of the population of a nation's largest city," *Economic Development and Cultural Change*, 33(1):71-98.
- Lee De Cola 1980 "A survey analysis of voting behavior in Ibadan, Nigeria," *Nigerian Journal of Economics and Social Studies*, 22(1): 123-144.
- Willard van Horne, Lee De Cola, and Frank L. Sweetser 1979 "Interregional equity as a basis for policy: allocation of resources among mental health regions in Massachusetts," in Antoni Kuklinski, et al eds., *Regional dynamics of socioeconomic change* (Tampere, Finland: Finnpublishers), pp. 479-493.

SELECTED ARTICLES AND MONOGRAPHS

- Lee De Cola and Stephen C. Guptill 2004 Spatial forecasting of regional states" *GIScience2004 3rd* International Conference on Geographic Information Science, pp. 50-52. October 20-23 2004, University of Maryland.
- 2003 Review of Stephen Wolfram, *A New Kind of Science*, in *The Professional Geographer*. 55(3):402-405.
- Charles M. Croner and Lee De Cola 2001 "Visualization of disease surveillance data with geostatistics" Papers of the Work Session on Methodological Issues Involving Integration of Statistics and Geography, Statistical Division of the United Nations Economic commission on Europe, Tallinn, Estonia, September, 10 pp.
- Wieczorek, G.F., Giuseppe Mandrone, and Lee De Cola 1997 "The influence of hillslope shape on debris-flow initiation: in Cheng-lung Chen (ed.), *Debris-flow Hazards Mitigation, Mechanics, Prediction, and Assessment: Proceedings of First International Conference*, ASCE, San Francisco, August 7-9, 1997, pp. 21-31.
- Lee De Cola and Neil Falcone 1996 "Exploratory analysis of environmental interactions in central California" electronic Open-File Report 95-654, USGS.

- Lee De Cola and Adil el Haimus 1995 “Teaching geographic concepts with GIS” *GIS World* May.
- Lee De Cola and Barbara P. Battenfield 1994 “Multiscale mapping for the NSDI: data modeling and representation”, GIS/LIS'94 Proceedings, pp. 870-880, Phoenix. Also appeared in slightly amended form in *Geomatics Info Magazine* (Netherlands) 9(3):6-9, March 1995 and in *Revista Cartographica* (Mexico) 53:57-68, 1996.
- 1991 “Multifractals in image processing and process imaging” USGS Open-File Report 91-301, 23 pp.
- 1989 Review of Jens Feder, *Fractals*, in *The Professional Geographer*, 41(2):242-243.
- 1989 “Multiscale data models for spatial analysis, with applications to multifractal phenomena,” Proceedings of AUTOCARTO 9, Baltimore MD, April, pp. 313-323.
- 1986 “A taxonomic review of settlement size distribution models,” Regional Research Institute Working Paper 8618, West Virginia University, Morgantown, 30 pp.
- 1980 *From data to information: a guide to practical research* (Ibadan: University of Ibadan Department of Political Science, mimeo), 246 pp.
- 1973 “An analysis of housing consumption with implications for the design of a housing allowance program” (Cambridge: Harvard/MIT Joint Center for Urban Studies Research Paper), 26 pp.
- 1969 “Research strategies in large-scale federal social programs,” in Leonard J. Duhl, ed., *A symposium on the urban crisis* (Berkeley: University of California Center for Planning and Development Research), pp. 1-47.

SKILLS

Data science & visualization
 Wikipedia editing
 spatial and temporal analysis
 GIS

R environment
 Windows
 SAS, Mathematica, SQL
 QGIS, GPS
 HTML
 Basic French, rudimentary German