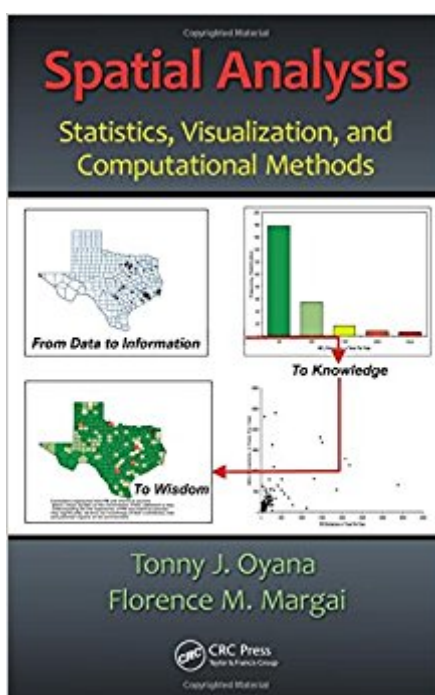


The book was found

# Spatial Analysis: Statistics, Visualization, And Computational Methods



## Synopsis

An introductory text for the next generation of geospatial analysts and data scientists, *Spatial Analysis: Statistics, Visualization, and Computational Methods* focuses on the fundamentals of spatial analysis using traditional, contemporary, and computational methods. Outlining both non-spatial and spatial statistical concepts, the authors present practical applications of geospatial data tools, techniques, and strategies in geographic studies. They offer a problem-based learning (PBL) approach to spatial analysisâcontaining hands-on problem-sets that can be worked out in MS Excel or ArcGISâas well as detailed illustrations and numerous case studies. The book enables readers to:

- Identify types and characterize non-spatial and spatial data
- Demonstrate their competence to explore, visualize, summarize, analyze, optimize, and clearly present statistical data and results
- Construct testable hypotheses that require inferential statistical analysis
- Process spatial data, extract explanatory variables, conduct statistical tests, and explain results
- Understand and interpret spatial data summaries and statistical tests

*Spatial Analysis: Statistics, Visualization, and Computational Methods* incorporates traditional statistical methods, spatial statistics, visualization, and computational methods and algorithms to provide a concept-based problem-solving learning approach to mastering practical spatial analysis. Topics covered include: spatial descriptive methods, hypothesis testing, spatial regression, hot spot analysis, geostatistics, spatial modeling, and data science.

## Book Information

Hardcover: 323 pages

Publisher: CRC Press; 1 edition (August 11, 2015)

Language: English

ISBN-10: 1498707637

ISBN-13: 978-1498707633

Product Dimensions: 1 x 6.2 x 9 inches

Shipping Weight: 1.6 pounds (View shipping rates and policies)

Average Customer Review: 5.0 out of 5 stars 2 customer reviews

Best Sellers Rank: #803,690 in Books (See Top 100 in Books) #97 in [Books > Science & Math > Chemistry > Geochemistry](#) #224 in [Books > Computers & Technology > Graphics & Design > Computer Modelling > Remote Sensing & GIS](#) #231 in [Books > Science & Math > Earth Sciences > Geography > Information Systems](#)

## Customer Reviews

"Spatial analysis is at the core of quantitative geography and geographic information systems (GIS). Oyana and Margai effectively explain the foundation of spatial analysis and progressively lead readers ways to apply fundamental and advanced methods for geographic problem solving. The book provides a good balance between concepts and practicums of spatial statistics with a comprehensive coverage of the most important approaches to understand spatial data, analyze spatial relationships and spatial patterns, and predict spatial processes. The book will be an excellent textbook for undergraduate courses in quantitative geography or spatial analysis. Graduate students new to geospatial sciences will also find the book useful for self-study." •May Yuan, University of Texas at Dallas"Right from the first page this book reads differently. Itâ™s not only the writing style which is so different from your run-of-the-mill dry statistical textbook but also the combination of theoretical presentations with study questions and challenge assignments, making the reading so much more enjoyable while forcing the reader to pause and reflect on the content of each Chapter. Another feature of this book is its breadth, encompassing the analysis of point, areal and geostatistical data before ending with a short chapter devoted to the hot topic of Big data, including data management and data mining. The illustration of different concepts using data from environmental and social sciences adds to the general appeal of the presentation. Tonny and Florence must be commended for writing a textbook that should make spatial analysis more accessible to geographers!"â •Pierre Goovaerts, BioMedware, Inc, PGeostat, LLC, University of Florida

Dr. Tonny J. Oyana received his Ph.D and his postdoctoral training from the University of Buffalo, New York, USA. He is currently the director of spatial analytics and informatics, Research Center for Health Disparities, Equity, and the Exposome; and a professor of spatial information systems in the Department of Preventive Medicine at the University of Tennessee Health Science Center, Knoxville, USA. His research focuses on establishing the relationship between environmental health and exposure; advancing GIS methods, algorithm design, and spatial analytical methods; and understanding the factors that contribute toward land systems change. In addition, he has authored more than 80 scientific works. Dr. Florence M. Margai (now deceased) was a professor in the Department of Geography at Binghamton University, New York, USA, where she taught courses that reflected her areas of specialization: advanced statistics, environmental health hazards, health disparities, and environmental analysis using geospatial and visualization technologies. She also served as the associate dean of Harpur College of Arts and Sciences, Vestal, New York, USA. Margai obtained her Ph.D from Kent State University, Ohio, USA, and worked with nonprofit

organizations to assist in the geographic targeting of vulnerable population groups for disease intervention and health promotional campaigns, sustainability, and capacity development initiatives.

This book gives a useful foundation in GIS with examples. If you're a beginner and you're wanting to start with the basics, this is the book to go with. It will give you a foundation in GIS AND statistics. The only downside is that it does not come with a GIS program key (in other words, you cannot get a temporary ArcGIS license or anything like that).

An excellent book!

[Download to continue reading...](#)

Spatial Analysis: Statistics, Visualization, and Computational Methods Visualization Analysis and Design (AK Peters Visualization Series) Statistics for People Who (Think They) Hate Statistics (Salkind, Statistics for People Who(Think They Hate Statistics(Without CD)) Master The Mechanical Aptitude and Spatial Relations Test (Mechanical Aptitude and Spatial Relations Tests) Barron's Mechanical Aptitude and Spatial Relations Test, 3rd Edition (Barron's Mechanical Aptitude & Spatial Relations Test) Analytics: Business Intelligence, Algorithms and Statistical Analysis (Predictive Analytics, Data Visualization, Data Analytics, Business Analytics, Decision Analysis, Big Data, Statistical Analysis) Simulating Enzyme Reactivity: Computational Methods in Enzyme Catalysis (Theoretical and Computational Chemistry Series) Computational Approaches to Protein Dynamics: From Quantum to Coarse-Grained Methods (Series in Computational Biophysics) The Esri Guide to GIS Analysis, Volume 2: Spatial Measurements and Statistics Computational Statistics (Statistics and Computing) Handbook of Cryo-Preparation Methods for Electron Microscopy (Methods in Visualization) Spatial Analysis Methods of Road Traffic Collisions Statistics and Data Analysis for Microarrays Using R and Bioconductor, Second Edition (Chapman & Hall/CRC Mathematical and Computational Biology) Computational Statistics Handbook with MATLAB, Third Edition (Chapman & Hall/CRC Computer Science & Data Analysis) Computational Fluid Mechanics and Heat Transfer, Third Edition (Series in Computational and Physical Processes in Mechanics and Thermal Sciences) Theoretical Neuroscience: Computational and Mathematical Modeling of Neural Systems (Computational Neuroscience Series) The Power of Computational Thinking: Games, Magic and Puzzles to Help You Become a Computational Thinker Using IBM<sup>®</sup> SPSS<sup>®</sup> Statistics for Research Methods and Social Science Statistics Current Topics in Computational Molecular Biology (Computational Molecular Biology) Statistics and Data Analysis for Financial Engineering: with R examples (Springer Texts in Statistics)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)