

'This is a vital primer to what is "Big" about Geocomputation: new data (and lots of them), innovative methods of analysis, new geographic information technologies and, above all, an over-arching rethink of how we represent geography. It provides an important and strategic contribution to contemporary scientific geography and data analytics.'

Paul Longley, Professor of Geographic Information Science, University College London

Geocomputation is the intersection of advanced computational methods and geographical analysis and modelling. Geocomputation is applied and often interdisciplinary, with methodological developments typically embedded in applications seeking to address real world problems. Geocomputation excels as a framework for researching many contemporary social science problems associated with large volumes of dynamic and spatio-temporal 'big data', such as those generated in 'smart city' contexts or from crowdsourcing.

This text:

- provides a selection of practical examples of geocomputation techniques and 'hot topics' written by world leading practitioners
- integrates selected supporting materials, such as code and data so that readers can work through some examples themselves

Chapters provide highly applied and practical discussions of:

- visualisation and exploratory spatial data analysis / space time modelling / spatial algorithms / spatial regression and statistics / open geographic information systems and science

All chapters are uniform in design, and each includes an introduction, case study and conclusion – drawing together both the generalities of the chapter topic and illustration through the case study application. Guidance for further reading is also provided.

This accessible text, published in full colour, has been specifically designed for those readers who are new to Geocomputation as an area of research, showing how complex real-world problems can be solved through the integration of technology, data, and geocomputational methods. This is the key primer for applied Geocomputation in the social sciences.

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CONTENTS

About the Authors	vii
Preface	xiii
Introduction	xv
<i>Chris Brunsdon and Alex Singleton</i>	
Further Resources	xxi
PART I DESCRIBING HOW THE WORLD LOOKS	1
1 Spatial Data Visualisation with R	3
<i>James Cheshire and Robin Lovelace</i>	
2 Geographical Agents in Three Dimensions	21
<i>Paul M. Torrens</i>	
3 Scale, Power Laws, and Rank Size in Spatial Analysis	40
<i>Michael Batty</i>	
PART II EXPLORING MOVEMENTS IN SPACE	61
4 Agent-Based Modeling and Geographical Information Systems	63
<i>Andrew Crooks</i>	
5 Microsimulation Modelling for Social Scientists	78
<i>Kirk Harland and Mark Birkin</i>	
6 Spatio-Temporal Knowledge Discovery	97
<i>Harvey J. Miller</i>	
7 Circular Statistics	110
<i>David Rohde and Jonathan Corcoran</i>	
PART III MAKING GEOGRAPHICAL DECISIONS	135
8 Geodemographic Analysis	137
<i>Alexandros Alexiou and Alex Singleton</i>	

9 Social Area Analysis and Self-Organizing Maps	152
<i>Seth Spielman and David C. Folch</i>	
10 Kernel Density Estimation and Percent Volume Contours	169
<i>Daniel Lewis</i>	
11 Location-Allocation Models	185
<i>Melanie Tomintz, Graham Clarke and Nawaf Alfadhli</i>	
PART IV EXPLAINING HOW THE WORLD WORKS	199
12 Geographically Weighted Generalised Linear Modelling	201
<i>Tomoki Nakaya</i>	
13 Spatial Interaction Models	221
<i>Karyn Morrissey</i>	
14 Python Spatial Analysis Library (PySAL): An Update and Illustration	233
<i>Sergio J. Rey</i>	
15 Reproducible Research: Concepts, Techniques and Issues	254
<i>Chris Brunsdon and Alex Singleton</i>	
PART V ENABLING INTERACTIONS	265
16 Using Crowd-Sourced Information to Analyse Changes in the Onset of the North American Spring	267
<i>Chris Brunsdon and Lex Comber</i>	
17 Open Source GIS Software	281
<i>Oliver O'Brien</i>	
18 Public Participation in Geocomputation to Support Spatial Decision-Making	301
<i>Richard Kingston</i>	
Conclusion: The Future of Applied Geocomputation	320
<i>Chris Brunsdon and Alex Singleton</i>	
References	327
Index	364