

'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.

CHRIS BRUNSDON is Professor of Geocomputation at the National University of Ireland, Maynooth.

ALEX SINGLETON is a Reader in Geographic Information Science at the University of Liverpool.

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