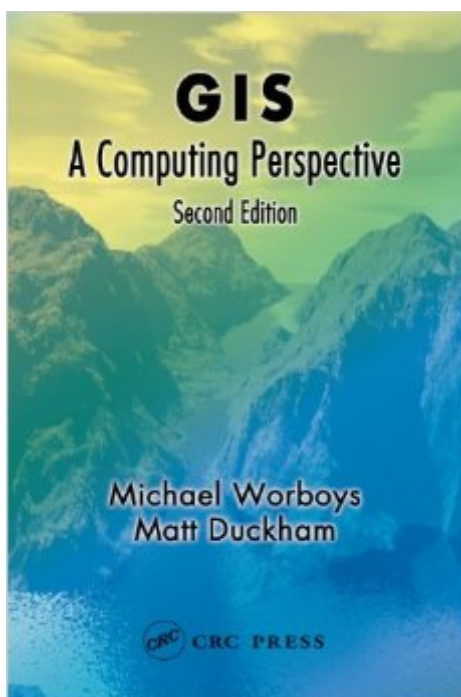


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# GIS: A Computing Perspective, Second Edition



## Synopsis

GIS: A Computing Perspective, Second Edition, provides a full, up-to-date overview of GIS, both Geographic Information Systems and the study of Geographic Information Science. Analyzing the subject from a computing perspective, the second edition explores conceptual and formal models needed to understand spatial information, and examines the representations and data structures needed to support adequate system performance. This volume also covers the special-purpose interfaces and architectures required to interact with and share spatial information, and explains the importance of uncertainty and time. The material on GIS architectures and interfaces as well as spatiotemporal information systems is almost entirely new. The second edition contains substantial new information, and has been completely reformatted to improve accessibility. Changes include: A new chapter on spatial uncertainty Complete revisions of the bibliography, index, and supporting diagrams Supplemental material is offset at the top of the page, as are references and links for further study Definitions of new terms are in the margins of pages where they appear, with corresponding entries in the index

## Book Information

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## Customer Reviews

Having read many books of the kind I can state with confidence that this one is the best introductory book on the topic. The authors claim that the book is best-suited to people approaching GISs with a computer-science perspective and/or background and this should be taken into consideration by all prospective buyers. However, the book should still be a most valuable resource to readers from

other backgrounds, as it remains the most comprehensive in its domain, and is very readable thanks to the lucid writing style of the authors. Each chapter except the first, which serves as a general introduction, deals with a particular sub-discipline within GIS. Chapter 2 describes the basics of databases. Chapter 3 clarifies important topological and metric concepts. Chapter 4 enters the area of field vs. object data models. Chapter 5 deals with raster and vector structures as well as with computational geometry and geometric algorithms. Chapter 6 moves even closer to the physical computer level and discusses indexes (access structures) and trees. Chapter 7 is about architectures (distributed, homogeneous, heterogeneous systems). Chapter 8 talks about GIS-interfaces. Until that point, the book has a very logical structure with each chapter being the logical extension of the next. Chapters 9 and 10 exist only in this second edition and provide some brief excursions into the topics of handling uncertainty and time in GIS respectively. They go into somewhat less detail than the previous chapters, yet are very well written. Remember that this book is introductory, hence don't expect to learn the intricate details of topics such as databases and computational geometry.

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