
Foreword

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This book organizes the bewildering array of spatial and multi-dimensional indexing methods into a coherent field. Hanan Samet is the dean of “spatial data indexing.” His two previous books have been the essential reference works for over a decade. This book unifies those previous books, and places the field in the broader context of indexing and searching for information in any metric space.

The book is encyclopedic. Nonetheless, it reads very well as a textbook that systematically develops the ideas. The four major chapters (points, objects, multidimensional intervals including rectangles, and high-dimensional data), are concise, copiously illustrated, and have exercises at the end of each section with detailed answers at the end of the book. The book includes tutorials on B-trees, linear hashing, and spiral hashing, has a huge bibliography (over 2,000 references), a detailed index compiled by the author, and a website (<http://www.cs.umd.edu/~hjs/quadtree/>) with demonstration programs and datasets.

There is no question that mastering this book will take time—but this book will be invaluable for those of us who struggle with spatial data, or with scientific datasets, or with graphics and vision problems involving volumetric queries, or with higher-dimensional datasets common in data mining.