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Data Management for Multimedia Retrieval

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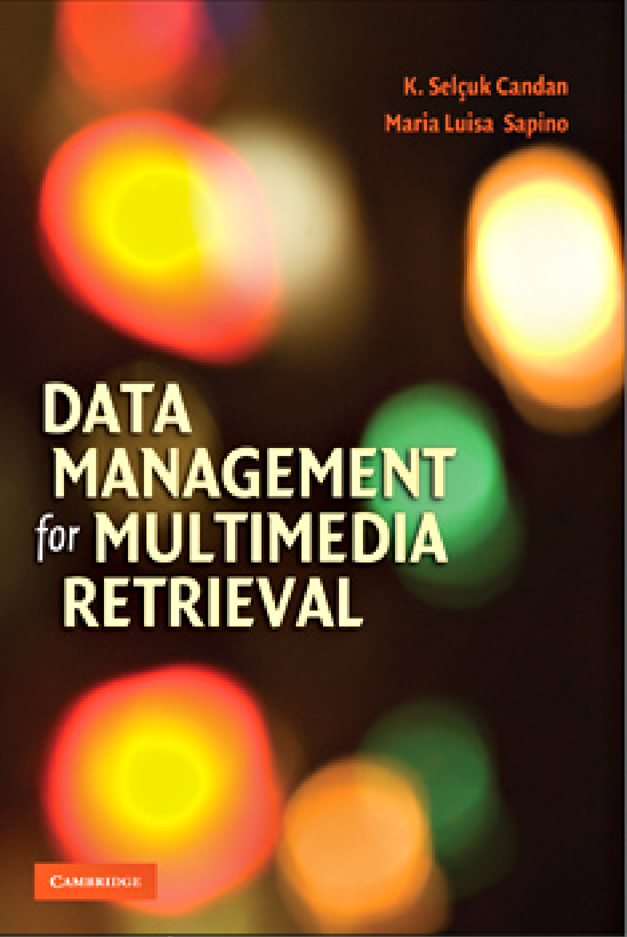

K. Selçuk Candan

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DATA MANAGEMENT for MULTIMEDIA RETRIEVAL

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Data Management for Multimedia Retrieval

Multimedia data require specialized management techniques because the representations of color, time, semantic concepts, and other underlying information can be drastically different from one another. The user's subjective judgment can also have significant impact on what data or features are relevant in a given context. These factors affect both the performance of the retrieval algorithms and their effectiveness. This textbook on multimedia data management techniques offers a unified perspective on retrieval efficiency and effectiveness. It provides a comprehensive treatment, from basic to advanced concepts, that will be useful to readers of different levels, from advanced undergraduate and graduate students to researchers and professionals.

After introducing models for multimedia data (images, video, audio, text, and web) and for their features, such as color, texture, shape, and time, the book presents data structures and algorithms that help store, index, cluster, classify, and access common data representations. The authors also introduce techniques, such as relevance feedback and collaborative filtering, for bridging the "semantic gap" and present the applications of these to emerging topics, including web and social networking.

K. Selçuk Candan is a Professor of Computer Science and Engineering at Arizona State University. He received his Ph.D. in 1997 from the University of Maryland at College Park. Candan has authored more than 140 conference and journal articles, 9 patents, and many book chapters and, among his other scientific positions, has served as program chair for ACM Multimedia Conference'08, the International Conference on Image and Video Retrieval (CIVR'10), and as an organizing committee member for ACM SIG Management of Data Conference (SIGMOD'06). In 2011, he will serve as a general chair for the ACM Multimedia Conference. Since 2005, he has also been serving as an associate editor for the *International Journal on Very Large Data Bases* (*VLDB*).

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DATA MANAGEMENT FOR
MULTIMEDIA RETRIEVAL

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