The main objective of this book is to excite the curiosity of its readers and inspire new technological breakthroughs in the exciting field of image and video retrieval systems.

Only a few years ago there was a small group of researchers and practitioners in the field of content-based image and video retrieval techniques. Today, this area has become one of the emerging areas of research in the multimedia field, with a large number of applications. These new applications, such as digital libraries, video-on-demand systems, geographic information systems, astronomical research, satellite observation systems, criminal investigation systems and others, need to store large collections of multimedia data consisting of images, video, and audio data. The challenge is to exploit these large multimedia databases by content.

Another challenge is the World Wide Web, which is a very large distributed information database. Most current search and retrieval systems use keywords only. However, in order to realize the full potential of the Web and search and retrieve multimedia data from the Web effectively requires adding the content-based retrieval techniques.

This book addresses the basic concepts and techniques for designing content-based image and video retrieval systems. It also discusses a variety of design choices for the key components of these systems. The book gives a comprehensive survey of the content-based image retrieval systems including several content-based video retrieval systems. The survey includes both research and commercial content-based retrieval systems. Finally, the book presents a detailed case study of designing MUSE — a content-based image retrieval system developed at Florida Atlantic University in Boca Raton, Florida.

The book also contains pointers to two hundred representative bibliographic references on this field — ranging from survey papers to de-
scription of recent work in the area, to entire books — and more than seventy Web sites.

A Web page for the book, containing color versions of representative images, updated useful links, and supplemental materials is available at: http://www.cse.fau.edu/~omarques/CBIVRBook.

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