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	Autore	Li Ze-Nian
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	Collana	Texts in Computer Science, , 1868-0941
	Disciplina	006.7
	Soggetti	Optical data processing
		Computer communication systems
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		Database management
		Image Processing and Computer Vision
		Computer Communication Networks
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	Note generali	Includes index.
	Nota di contenuto	Part I: Introduction and Multimedia Data Representations -- Introduction to Multimedia -- A Taste of Multimedia -- Graphics and Image Data Representations -- Color in Image and Video -- Fundamental Concepts in Video -- Basics of Digital Audio -- Part II: Multimedia Data Compression -- Lossless Compression Algorithms -- Lossy Compression Algorithms -- Image Compression Standards -- Basic Video Compression Techniques -- MPEG Video Coding: MPEG-1, 2, 4 and 7 -- New Video Coding Standards: H.264 and H.265 -- Basic Audio Compression Techniques -- MPEG Audio Compression -- Part III: Multimedia Communications and Networking -- Network Services and Protocols for Multimedia Communications -- Internet Multimedia Content Distribution -- Multimedia over Wireless and Mobile Networks -- Part IV: Multimedia Information Sharing and Retrieval -- Social Media Sharing -- Cloud Computing for Multimedia Services -- Content-Based Retrieval in Digital Libraries.

Sommario/riassunto

Multimedia is a ubiquitous part of the technological environment in which we work and think, touching upon almost all aspects of computer science and engineering. This comprehensive textbook introduces the Fundamentals of Multimedia in an accessible manner, addressing real issues commonly faced in the workplace. Suitable for both advanced undergraduate and graduate students, the essential concepts are explained in a practical way to enable students to apply their existing skills to address problems in multimedia. Fully revised and updated, this new edition now includes coverage of such topics as 3D TV, social networks, high-efficiency video compression and conferencing, wireless and mobile networks, and their attendant technologies. Topics and features: Presents a brief history and overview of the key concepts in multimedia, including important data representations and color science Reviews lossless and lossy compression methods for image, video and audio data Examines the demands placed by multimedia communications on wired and wireless networks Discusses the impact of social media and cloud computing on information sharing, and on multimedia content search and retrieval Includes study exercises at the end of each chapter Provides supplementary resources for both students and instructors at an associated website This classroom-tested textbook is ideal for higher-level undergraduate and graduate courses on multimedia systems. Practitioners in industry interested in current multimedia technologies will also find the book to be a useful reference. Dr. Ze-Nian Li and Dr. Mark S. Drew are Professors in the School of Computing Science at Simon Fraser University, Vancouver, BC, Canada. Dr. Jiangchuan Liu is an Associate Professor at the same institution.