

1. Record Nr.	UNINA9910822623403321
Titolo	Digital color : acquisition, perception, coding and rendering // edited by Christine Fernandez-Maloine, Frederique Robert-Inacio, Ludovic Macaire
Pubbl/distr/stampa	London : , : ISTE Hoboken, New Jersey : , : Wiley, , 2012
ISBN	1-118-56268-2 1-118-56324-7 1-118-56269-0 1-299-18892-3
Descrizione fisica	1 online resource (330 p.)
Collana	ISTE
Disciplina	006.6
Soggetti	Image converters Digital images Color vision Color photography - Digital techniques
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Title Page; Copyright Page; Table of Contents; Foreword; Chapter 1. Colorimetry and Physiology - The LMS Specification; 1.1. Physiological basis; 1.1.1. The photoreceptors; 1.1.2. Retinal organization; 1.1.3. Physiological modeling of visual attributes related to color; 1.2. The XYZ colorimetry: the benchmark model of CIE; 1.3. LMS colorimetry; 1.3.1. LMS fundamentals; 1.3.2. Application of LMS colorimetry; 1.3.3. Color discrimination; 1.4. Colors in their context; 1.4.1. CIECAM02; 1.4.2. Chromatic adaptation; 1.4.3. Partitioning of the perceptual space by the elementary hues 1.5. Conclusion1.6. Bibliography; Chapter 2. Color Constancy; 2.1. Introduction; 2.2. Theoretical preliminaries and problems; 2.2.1. Concept of illuminant; 2.2.2. Concept of objects' reflectance; 2.2.3. Problem of color constancy; 2.3. Color constancy models; 2.3.1. Model of the human visual system; 2.3.2. Von Kries diagonal model; 2.3.3. Land theory; 2.4. Color correction algorithms; 2.4.1. Gray world; 2.4.2.

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Sommario/riassunto

In this book the authors identify the basic concepts and recent advances in the acquisition, perception, coding and rendering of color. The fundamental aspects related to the science of colorimetry in relation to physiology (the human visual system) are addressed, as are constancy and color appearance. It also addresses the more technical aspects related to sensors and the color management screen. Particular attention is paid to the notion of color rendering in computer graphics. Beyond color, the authors also look at coding, compression, protection and quality of color images and videos.