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| | Descrizione fisica | 1 online resource (409 p.) |
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| | 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 | Color Constancy; Contents; Series Preface; Preface; 1 Introduction; 1.1 What is Color Constancy?; 1.2 Classic Experiments; 1.3 Overview; 2 The Visual System; 2.1 Eye and Retina; 2.2 Visual Cortex; 2.3 On the Function of the Color Opponent Cells; 2.4 Lightness; 2.5 Color Perception Correlates with Integrated Reflectances; 2.6 Involvement of the Visual Cortex in Color Constancy; 3 Theory of Color Image Formation; 3.1 Analog Photography; 3.2 Digital Photography; 3.3 Theory of Radiometry; 3.4 Reflectance Models; 3.5 Illuminants; 3.6 Sensor Response; 3.7 Finite Set of Basis Functions |
| | | 4 Color Reproduction4.1 Additive and Subtractive Color Generation; 4.2 Color Gamut; 4.3 Computing Primary Intensities; 4.4 CIE XYZ Color Space; 4.5 Gamma Correction; 4.6 Von Kries Coefficients and Sensor Sharpening; 5 Color Spaces; 5.1 RGB Color Space; 5.2 sRGB; 5.3 CIE L*u*v*Color Space; 5.4 CIE L*a*b*Color Space; 5.5 CMY Color Space; 5.6 HSI Color Space; 5.7 HSV Color Space; 5.8 Analog and Digital Video Color Spaces; 6 Algorithms for Color Constancy under Uniform Illumination; 6.1 White Patch Retinex; 6.2 The Gray World Assumption; 6.3 Variant of Horn's Algorithm |
| | | 6.4 Gamut-constraint Methods6.5 Color in Perspective; 6.6 Color Cluster Rotation; 6.7 Comprehensive Color Normalization; 6.8 Color Constancy Using a Dichromatic Reflection Model; 7 Algorithms for |

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| Sommario/riassunto | A human observer is able to recognize the color of objects irrespective of the light used to illuminate them. This is called color constancy. A digital camera uses a sensor to measure the reflected light, meaning that the measured color at each pixel varies according to the color of the illuminant. Therefore, the resulting colors may not be the same as the colors that were perceived by the observer. Obtaining color constant descriptors from image pixels is not only important for digital photography, but also valuable for computer vision, color-based automatic object recognition, and color imag |