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Nota di contenuto	Computational Colour Science using MATLAB®; Contents; Acknowledgements; About the Authors; Chapter 1 Introduction; 1.1 Preface; 1.2 Why Base this Book on MATLAB®?; 1.3 A Brief Review of the CIE System of Colorimetry; Chapter 2 Linear Algebra for Beginners; 2.1 Some Basic Definitions; 2.2 Solving Systems of Simultaneous Equations; 2.3 Function Approximation; Chapter 3 A Short Introduction to MATLAB®; 3.1 Matrices; 3.2 Matrix Operations; 3.3 Solving Linear Systems; 3.4 M-Files; 3.5 Using Functions in MATLAB®; Chapter 4 Computing CIE Tristimulus Values; 4.1 Introduction 4.2 Colour-Matching Functions4.3 Interpolation Methods; 4.4 Extrapolation Methods; 4.5 Correction for Spectral Bandpass; 4.6 Tristimulus Values; 4.7 Chromaticity Diagrams; Chapter 5 CIELAB and Colour Difference; 5.1 Introduction; 5.2 CIELAB and CIELUV Colour Space; 5.2.1 A Representation of CIELAB Using MATLAB®; 5.3 CIELAB

Colour Difference; 5.4 Optimised Colour-Difference Formulae; 5.4.1 CMC (l:c); 5.4.2 CIE 94; 5.4.3 CIEDE2000; Chapter 6 Chromatic-Adaptation Transforms and Colour Appearance; 6.1 Introduction; 6.2 Chromatic-Adaptation Transforms (CATs); 6.2.1 A Brief History of CATs 6.2.2 CMCCAT976.2.3 CMCCAT2000; 6.3 Colour-Appearance Models (CAMs); 6.3.1 CIECAM02; Chapter 7 Physiological Colour Spaces; 7.1 Introduction; 7.2 Colour Vision; 7.3 Cone-Excitation Space; 7.4 MacLeod and Boynton Chromaticity Diagram; 7.5 DKL Colour Space; Chapter 8 Colour Management; 8.1 The Need for Colour Management; 8.1.1 Using MATLAB® to Create Representations of Gamuts; 8.2 RGB Colour Spaces; 8.2.1 sRGB; 8.2.2 Adobe RGB (1998); 8.3 The International Color Consortium; 8.4 Characterisation and Calibration; 8.4.1 Approaches to Characterisation; Chapter 9 Display Characterisation 9.1 Introduction 9.2 Gamma; 9.3 The GOG Model; 9.4 Device-Independent Transformation; 9.5 Characterisation Example of CRT Display; 9.6 Beyond CRT Displays; Chapter 10 Characterisation of Cameras; 10.1 Introduction; 10.2 Correction for Nonlinearity; 10.3 Correction for Lack of Spatial Uniformity; 10.4 Characterisation; 10.5 Example Characterisation of a Digital Camera; Chapter 11 Characterisation of Printers; 11.1 Introduction; 11.1.1 Physical Models; 11.1.2 Neural Networks; 11.2 Characterisation of Half-Tone Printers; 11.2.1 Correction for Nonlinearity; 11.2.2 Neugebauer Models 11.2.3 Example Characterisation of a Half-Tone Printer 11.3 Characterisation of Continuous-Tone Printers; 11.3.1 Kubelka-Munk Models; 11.3.2 Interpolation of 3D Look-Up Tables; 11.3.3 General Linear and Nonlinear Transforms; 11.3.4 Example Characterisation of a Half-Tone Printer; Chapter 12 Multispectral Imaging; 12.1 Introduction; 12.2 Computational Colour Constancy and Linear Models; 12.2.1 Example Using MATLAB®; 12.3 Properties of Reflectance Spectra; 12.3.1 PCA and SVD; 12.3.2 SVD Using MATLAB®; 12.4 Application of SVD to Reflectance Recovery; 12.5 Techniques for Multispectral Imaging 12.5.1 Maloney-Wandell Method

Sommario/riassunto

"Describes how to implement colour science in a way that most other texts barely touch upon"--
