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Nota di contenuto	Preface -- Chapter 1: Our World of Light and Color -- Chapter 2: The Wave Nature of Light -- Chapter 3: Ray Optics: Reflections, Mirrors, and Kaleidoscopes -- Chapter 4: Refraction of Light -- Chapter 5: Interference and Diffraction -- Chapter 6: Polarized Light -- Chapter 7: Light Sources and the Particle Nature of Light -- Chapter 8: Sources of Color -- Chapter 9: Color Vision -- Chapter 11: Holography -- Chapter 12: Computer Imaging. Chapter 13: Photonics – Light in the 21st Century -- Chapter 14: Visual Perception, Illusions, and the Arts -- Appendices -- Subject Index -- Name Index.

Sommario/riassunto

Why is the sky blue? What is the nature of light? What can visual illusions tell us about the nature of perception? In this fully revised edition of the classic textbook, Professors Rossing and Chiaverina present the science of light – that is, the science behind what and how we see. Their approach emphasizes phenomena rather than mathematical theories, and the joy of discovery rather than the drudgery of derivations – the opposite of "heavy science". The text explores such topics as: the effects of mirrors and prisms on the color of light; the optics of the eye and camera; the physiology of the eye and the nature of color vision; the different kinds of sources of light; compact discs; photography and holography; symmetry in art and nature; color in printing and painting; and computer imaging and processing. It includes numerous problems, questions for discussion, and suggestions for simple experiments to support interactive learning. This updated edition contains a wealth of new full-color artwork, and information on the latest developments in light source and display technologies. Requiring no prior knowledge of physics, it will appeal to students and any reader interested in the visual arts.