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Nota di contenuto	Contents; 1 Physics for security; 2 Magnetism and magnetic resonance; 3 Interactions of ionising radiation; 4 Mechanical waves and properties of matter; 5 Information and data analysis; 6 Analysis and damage by irradiation; 7 Imaging with magnetic resonance; 8 Medical imaging and therapy with ionising radiation; 9 Ultrasound for imaging and therapy; 10 Forward look and conclusions; Appendices; Index
Sommario/riassunto	This unique textbook explains the fundamental physics that makes it possible to see inside things around us. Written for professional physicists and students, it follows applications in medicine and elsewhere. It puts physics in a cultural context, addresses matters of fear and safety, and reaches some significant conclusions. - ;Physics has reduced fear and increased safety for society, largely by extending the power to see. The methods used are magnetic resonance, ionising radiation and sound, with their extensions. This textbook expounds the fundamental physics of these. It follows how they