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Nota di contenuto	Frontmatter -- Contents -- Preface and acknowledgements -- 1. Introduction -- 2. Digital image processing -- 3. Essentials of medical x-ray physics -- 4. Tomography -- 5. Radiobiology, radiotherapy, and radiation protection -- 6. Phase contrast radiography -- 7. Object reconstruction: nonideal conditions and noise -- Index
Sommario/riassunto	Covering both physical as well as mathematical and algorithmic foundations, this graduate textbook provides the reader with an introduction into modern biomedical imaging and image processing and reconstruction. These techniques are not only based on advanced instrumentation for image acquisition, but equally on new developments in image processing and reconstruction to extract relevant information from recorded data. To this end, the present book offers a quantitative treatise of radiography, computed tomography, and medical physics. ContentsIntroductionDigital image processingEssentials of medical x-ray physicsTomographyRadiobiology, radiotherapy, and radiation

protectionPhase contrast radiographyObject reconstruction under nonideal conditions