1. Record Nr. UNINA9910830713703321

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Titolo	Medical imaging physics [[electronic resource] /] / William R. Hendee, E. Russell Ritenour
Pubbl/distr/stampa	New York, : Wiley-Liss, c2002
ISBN	9780471221159 1-280-36665-6 9786610366651 0-470-30359-X 0-471-46113-X 0-471-22115-5
Edizione	[4th ed.]
Descrizione fisica	1 online resource (534 p.)
Altri autori (Persone)	RitenourE. Russell <1953->
Disciplina	616.0754
Soggetti	Diagnostic imaging Imaging systems in medicine Medical physics Radiology, Medical
Lingua di pubblicazione	Inglese
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	MEDICAL IMAGING PHYSICS Fourth Edition; CONTENTS IN BRIEF; CONTENTS; PREFACE; PREFACE TO THE FIRST EDITION; ACKNOWLEDGMENTS; 1 IMAGING IN MEDICINE; OBJECTIVES; INTRODUCTION; CONCLUSIONS; REFERENCES; 2 STRUCTURE OF MATTER; OBJECTIVES; THE ATOM; SOLIDS; SUPERCONDUCTIVITY; THE NUCLEUS; NUCLEAR FISSION AND FUSION; NUCLEAR SPIN AND NUCLEAR MAGNETIC MOMENTS; NUCLEAR NOMENCLATURE; PROBLEMS; SUMMARY; REFERENCES; 3 RADIOACTIVE DECAY; OBJECTIVES; NUCLEAR STABILITY AND DECAY; ALPHA DECAY; DECAY SCHEMES; BETA DECAY; ISOMERIC TRANSITIONS; MATHEMATICS OF RADIOACTIVE DECAY; DECAY EQUATIONS AND HALF-LIFE TRANSIENT EQUILIBRIUMARTIFICIAL PRODUCTION OF RADIONUCLIDES; MATHEMATICS OF NUCLIDE PRODUCTION BY NEUTRON BOMBARDMENT; INFORMATION ABOUT RADIOACTIVE NUCLIDES; PROBLEMS; SUMMARY; REFERENCES; 4 INTERACTIONS OF RADIATION;

OBJECTIVES; CHARACTERISTICS OF INTERACTIONS; DIRECTLY IONIZING RADIATION; INTERACTIONS OF ELECTRONS; INTERACTIONS OF HEAVY, CHARGED PARTICLES; INDIRECTLY IONIZING RADIATION; INTERACTIONS OF NEUTRONS; ATTENUATION OF X AND g RADIATION; NONIONIZING RADIATION; INTERACTIONS OF NONIONIZING ELECTROMAGNETIC RADIATION; PROBLEMS; SUMMARY; REFERENCES; 5 PRODUCTION OF X RAYS; OBJECTIVES
INTRODUCTIONCONVENTIONAL X-RAY TUBES; ELECTRON SOURCE; TUBE VOLTAGE AND VOLTAGE WAVEFORMS; RELATIONSHIP BETWEEN FILAMENT CURRENT AND TUBE CURRENT; EMISSION SPECTRA; FILTRATION; TUBE VACUUM; ENVELOPE AND HOUSING; SPECIAL-PURPOSE X-RAY TUBES; RATINGS FOR X-RAY TUBES; PROBLEMS; SUMMARY; REFERENCES; 6 RADIATION QUANTITY AND QUALITY; OBJECTIVES; INTENSITY; TRADITIONAL VERSUS SYSTEME INTERNATIONAL UNITS; RADIATION EXPOSURE; UNITS OF RADIATION DOSE; DOSE EQUIVALENT; MEASUREMENT OF RADIATION DOSE; HALF-VALUE LAYER; VARIATION IN QUALITY ACROSS AN X-RAY BEAM; SPECTRAL DISTRIBUTION OF AN X-RAY BEAM
PROBLEMSSUMMARY; REFERENCES; 7 INTERACTION OF X AND g RAYS IN THE BODY; OBJECTIVES; INTRODUCTION; F FACTOR; ATTENUATION OF X AND g RAYS IN TISSUE; DOSE TO SOFT TISSUE BEYOND BONE; HIGH-VOLTAGE RADIOGRAPHY; LOW-VOLTAGE RADIOGRAPHY; CONTRAST MEDIA; PROBLEMS; SUMMARY; REFERENCES; 8 RADIATION DETECTORS FOR QUANTITATIVE MEASUREMENT; OBJECTIVES; IONIZATION CHAMBERS; PROPORTIONAL COUNTERS; GEIGER-MULLER TUBES; SOLID SCINTILLATION DETECTORS; LIQUID SCINTILLATION DETECTORS; SEMICONDUCTOR RADIATION DETECTORS; PROBLEMS; SUMMARY; REFERENCES; 9 ACCUMULATION AND ANALYSIS OF NUCLEAR DATA; OBJECTIVES
INTRODUCTIONCOUNTING SYSTEMS; DETERMINATE ERRORS IN RADIOACTIVITY MEASUREMENTS; GAMMA-RAY SPECTROMETRY; PULSE HEIGHT SPECTRA; PHOTOPEAK COUNTING; RADIOACTIVE AGENTS FOR CLINICAL STUDIES; PROBLEMS; SUMMARY; REFERENCES; 10 COMPUTERS AND IMAGE NETWORKING; OBJECTIVES; HISTORY; MACHINE REPRESENTATION OF DATA; COMPUTER SYSTEM HARDWARE; SOFTWARE; NETWORKING; PROBLEMS; SUMMARY; REFERENCES; 11 PROBABILITY AND STATISTICS; OBJECTIVES; INTRODUCTION; NATURE OF ERROR; PROBABILITY DISTRIBUTIONS; SIGNAL AND NOISE; METHODS TO DESCRIBE PROBABILITY DISTRIBUTIONS; PROPAGATION OF ERROR OTHER METHODS FOR DESCRIBING PRECISION

Sommario/riassunto

This comprehensive publication covers all aspects of image formation in modern medical imaging modalities, from radiography, fluoroscopy, and computed tomography, to magnetic resonance imaging and ultrasound. It addresses the techniques and instrumentation used in the rapidly changing field of medical imaging. Now in its fourth edition, this text provides the reader with the tools necessary to be comfortable with the physical principles, equipment, and procedures used in diagnostic imaging, as well as appreciate the capabilities and limitations of the technologies.