1. Record Nr. UNINA9910792479703321 Autore Szabo Thomas L Titolo Diagnostic ultrasound imaging: inside out // Thomas L. Szabo, Boston University, Boston, MA, USA Oxford:,: Academic Press,, 2014 Pubbl/distr/stampa **ISBN** 0-12-396542-X Edizione [Second edition.] Descrizione fisica 1 online resource (xxii, 806 pages) : illustrations (some color) Collana MATLAB examples Biomedical engineering UF 6300 Classificazione YR 2530 Disciplina 829 Soggetti Diagnostic ultrasonic imaging Ultrasonic imaging 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 Front Cover; Diagnostic Ultrasound Imaging: Inside Out; Copyright Page; Contents; Preface; Acknowledgments; 1 Introduction; 1.1 Introduction; 1.1.1 Early Beginnings; 1.1.2 Sonar; 1.2 Echo Ranging of the Body; 1.3 Ultrasound Portrait Photographers; 1.4 Ultrasound Cinematographers; 1.5 Modern Ultrasound Imaging Developments; 1.6 Enabling Technologies for Ultrasound Imaging: 1.7 Ultrasound Imaging Safety: 1.8 Ultrasound and Other Diagnostic Imaging Modalities: 1.8.1 Imaging Modalities Compared; 1.8.2 Ultrasound; 1.8.3 Plane X-rays; 1.8.4 Computed Tomography Imaging 1.8.5 Magnetic Resonance ImagingMagnetic Resonance Imaging Applications: 1.8.6 Magnetoencephalography: 1.8.7 Positron Emission Tomography; 1.9 Contrast Agents; 1.9.1 Computed Tomography Agents: 1.9.2 Magnetic Resonance Imaging Agents: 1.9.3 Ultrasound Agents; 1.10 Comparison of Imaging Modalities; 1.10.1 Image Fusion; 1.10.2 Multi-wave and Interactive Imaging; 1.11 Conclusion; References; Bibliography; 2 Overview; 2.1 Introduction; 2.2 Fourier

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## Sommario/riassunto

This book provides a unified description of the physical principles of ultrasound imaging, signal processing, systems and measurements. This comprehensive reference is a core resource for both graduate students and engineers in medical ultrasound research. With continuing rapid technological development of ultrasound in medical diagnosis, it is a critical subject for biomedical engineers, clinical and healthcare engineers and practitioners, medical physicists, and related professionals in the fields of signal and image processing. It contains new and updated chapters on 15 topics an