Haim Azhari - List of Publications

Refereed Papers in Professional Journals


Weiss N, Goldberg SN, Sosna J, Azhari H: "Non-invasive temperature monitoring and hyperthermic injury onset detection using X-ray CT during HIFU thermal treatment in ex-vivo fatty tissue". International Journal of


Reviews


Text Books

2006 “Ultrasound: Physical Principles and Medical Applications”

by: Haim Azhari

Synopsis: This book provides the basic physical and engineering principles of ultrasound in the context of medical applications. The book starts with a basic description of waves and their mathematical description. It then analyzes the propagation of mechanical waves in rods, strings, fluids and solids. Attenuation reflection and transmission are then described. Then, the design principles of acoustic lenses and mirrors are outlined followed by the description of ultrasonic transducers and the calculation of their acoustic fields. Three chapters are then dedicated to the various imaging techniques (including also Doppler measurements). And finally safety and therapeutic applications are discussed.

Soft cover: 301 pages,

Publisher: Michlol Inc.

; 1st edition (July 2006)

; 2nd edition (May 2007)

Language: Hebrew

Publisher Code: 11122842
2010 "Basics of Biomedical Ultrasound for Engineers"

by: Haim Azhari

Synopsis: Basics of Biomedical Ultrasound for Engineers is a structured textbook that leads the novice through the field in a clear, step-by-step manner. Based on twenty years of teaching experience, it begins with the most basic definitions of waves, proceeds to ultrasound in fluids and solids, explains the principles of wave attenuation and reflection, then introduces to the reader the principles of focusing devices, ultrasonic transducers and acoustic fields, and then delves into integrative applications of ultrasound in conventional and advanced medical imaging techniques (including Doppler imaging) and therapeutic ultrasound. Demonstrative medical applications are interleaved within the text and exemplary questions with solutions are provided on every chapter. Readers will come away with the basic toolkit of knowledge they need to successfully use ultrasound in biomedicine and conduct research.

Hardcover: 371 pages

Publisher: John Wiley & Sons Inc.-IEEE Press;

1st edition (March 15, 2010)

Language: English

ISBN-10: 0470465476


http://www.amazon.com/Basics-Biomedical-Ultrasound-Engineers-Azhari/dp/0470465476

Chapters in Books


**Letters to the Editor**
