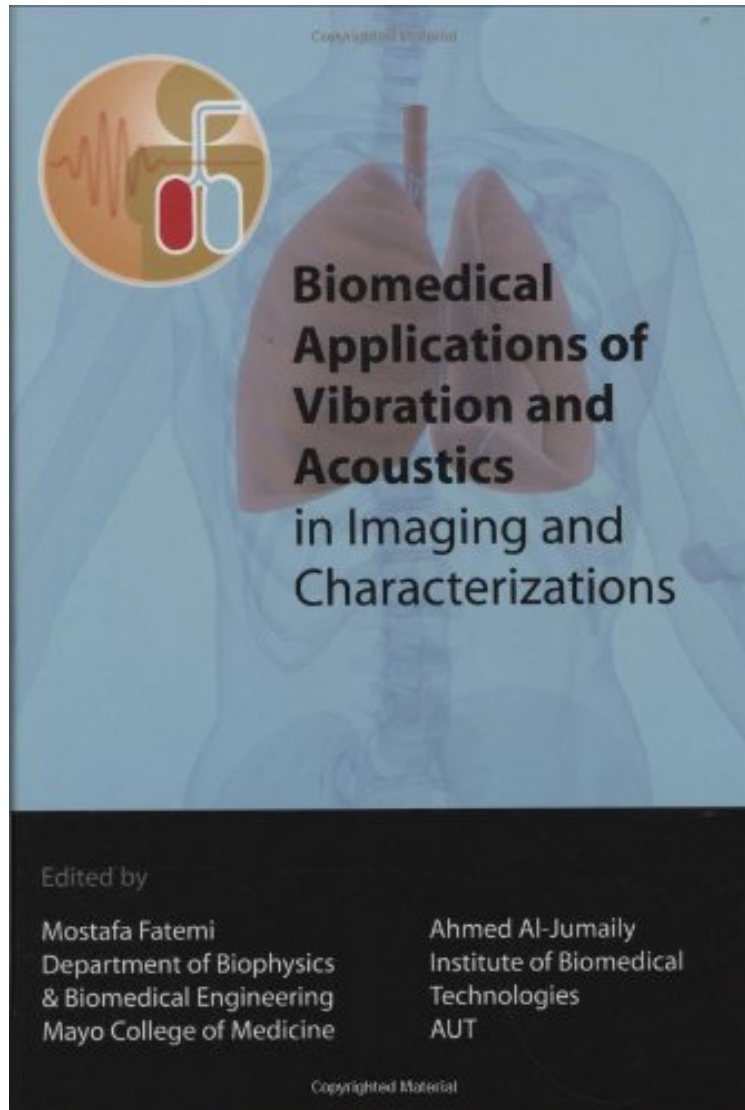


Biomedical Applications of Vibration and Acoustics in Imaging and Characterizations

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Ahmed Al-Jumaily, Mostafa Fatemi : Biomedical Applications of Vibration and Acoustics in Imaging and Characterizations before purchasing it in order to gage whether or not it would be worth my time, and all praised Biomedical Applications of Vibration and Acoustics in Imaging and Characterizations:

The primary objective of this book is to compile the latest research topics on biomedical imaging and tissue characterization techniques that utilize vibration and acoustics. This book includes two parts. The first part is dedicated to imaging, which is comprised of eight chapters. The first seven chapters in this part are focused on methods that utilize acoustic radiation force. These chapters included methods, such as Vibro-acoustography, Dual Radiation Force, Acoustic Radiation Force Imaging, and Harmonic Motion Imaging. The eighth chapter in this part is on Magnetic Resonance Elastography. The second part is dedicated to the applications of vibration and acoustics in tissue characterization. This part contains five chapters. The first two chapters are on characterization of arterial vessels, using either pressure waves or radiation force of ultrasound. The next two chapters are focused on tissue motion detection and estimation of tissue viscoelasticity. The last chapter in this part is on characterization of bone using elastic waves. Since most methods presented in this book are based on ultrasound, it deemed appropriate to include an appendix on ultrasound bioeffects as well as safety standards and guidelines for practice of diagnostic ultrasound. Readers will find this text a valuable asset in keeping them abreast of the latest techniques in this area. It will appeal not only to fellow researchers, but also to clinicians, practitioners, lecturers and students in this exciting and vital field of study.