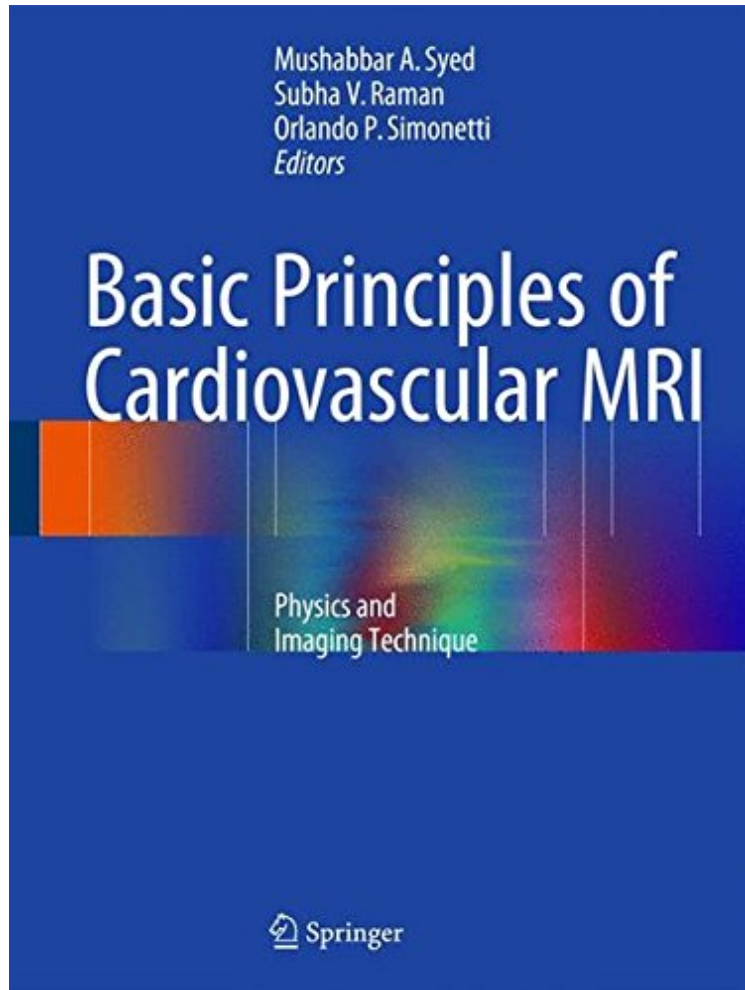


(Pdf free) Basic Principles of Cardiovascular MRI: Physics and Imaging Techniques

Basic Principles of Cardiovascular MRI: Physics and Imaging Techniques

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From Springer : Basic Principles of Cardiovascular MRI: Physics and Imaging Techniques before purchasing it in order to gage whether or not it would be worth my time, and all praised Basic Principles of Cardiovascular MRI: Physics and Imaging Techniques:

This book is a comprehensive and authoritative text on the expanding scope of CMR, dedicated to covering basic principles in detail focusing on the needs of cardiovascular imagers. The target audience for this book includes CMR specialists, trainees in CMR and cardiovascular medicine, cardiovascular physicists or clinical cardiovascular imagers.

This book includes figures and CMR examples in the form of high-resolution still images and is divided in two sections: basic MRI physics, i.e. the nuts and bolts of MR imaging; and imaging techniques (pulse sequences) used in cardiovascular MR imaging. Each imaging technique is discussed in a separate chapter that includes the physics and clinical applications (with cardiovascular examples) of a particular technique. Evolving techniques or research based techniques are discussed as well. This section covers both cardiac and vascular imaging. Cardiovascular magnetic resonance (CMR) imaging is now considered a clinically important imaging modality for patients with a wide variety of cardiovascular diseases. Recent developments in scanner hardware, imaging sequences, and analysis software have led to 3-dimensional, high-resolution imaging of the cardiovascular system. These developments have also influenced a wide variety of cardiovascular imaging applications and it is now routinely used in clinical practice in CMR laboratories around the world. The non-invasiveness and lack of ionizing radiation exposure make CMR uniquely important for patients whose clinical condition requires serial imaging follow-up. This is particularly true for patients with congenital heart disease (CHD) with or without surgical corrections who require lifelong clinical and imaging follow-up.

The text is aimed at fellowship trainees but also as an aide-memoire for the established practitioner. It would be of great assistance to cardiovascular radiographers, explaining clearly many of the artefacts associated with this complex imaging technique and providing practical solutions. In a world where the time to understand and develop new techniques and services becomes fewer, as the pressure to deliver scans or scan reports increases, this book is an essential addition to an individuals or departments library. (Dr. Roger Bury, RAD Magazine, December, 2016)From the Back CoverThis book is a comprehensive and authoritative text on the subject of cardiovascular magnetic resonance (CMR). Imaging experts from the most medically advanced areas of the world discuss the basic principles of this modality in detail while maintaining a focus on the needs of cardiovascular imagers who wish to learn more about this subject but do not have a strong background in physics. CMR is now considered a clinically important imaging modality for patients with a wide variety of cardiovascular diseases. Recent developments have influenced a wide variety of cardiovascular imaging applications, many of which are now routinely used in clinical practice in CMR laboratories around the world. That it is non-invasive and lacks ionizing radiation exposure make CMR uniquely important for patients whose clinical condition requires serial imaging follow-up. Basic Principles of Cardiovascular MRI: Physics and Imaging Techniques includes a wealth of CMR examples in the form of high-resolution still images. Each imaging technique is discussed in separate chapters that include the physics and clinical applications (with cardiovascular examples) of that particular technique. As such, this book will be essential for cardiovascular medicine specialists and trainees, cardiovascular physicists, and clinical cardiovascular imagers. About the Author Dr. Mushabbar Syed is an associate professor of medicine and radiology at Stritch School of Medicine, Loyola University of Chicago USA. He also serves as the director of cardiovascular imaging. Prior to his current position, Dr. Syed was an associate professor of medicine and radiology and director of cardiovascular CT MRI imaging at University of Kentucky, Lexington, Kentucky and assistant professor of medicine and radiology at Emory University School of Medicine, Atlanta, Georgia. Dr. Syed completed his medicine and cardiology training at Henry Ford Hospital, Detroit, Michigan followed by a clinical/research fellowship in cardiovascular MRI at the National Heart, Lung Blood Institute, National Institutes of Health, Bethesda, Maryland. He has recently co-edited a textbook titled Magnetic Resonance Imaging in Congenital Heart Disease published by Springer Inc. 2012. Subha Raman, MD, MSEE, FACC, is a cardiologist and associate professor of medicine at The Ohio State University Medical Center. After undergraduate and graduate studies in electrical engineering as a National Science Foundation Fellow, Dr. Raman completed medical training including fellowship in cardiovascular medicine at The Ohio State University College of Medicine, with additional training in cardiovascular magnetic resonance (CMR) at Wake Forest University. Dr. Raman has published more than 70 papers and was named one of Americas Best Doctors in 2009. Her clinical interests include family risk and heritable heart disease, womens cardiovascular health, early atherosclerosis detection and management, and improved stress testing. Dr. Ramans research team works to develop innovations in cardiovascular imaging that provide earlier detection, more accurate diagnosis and personalized treatment of heart and vascular disease.