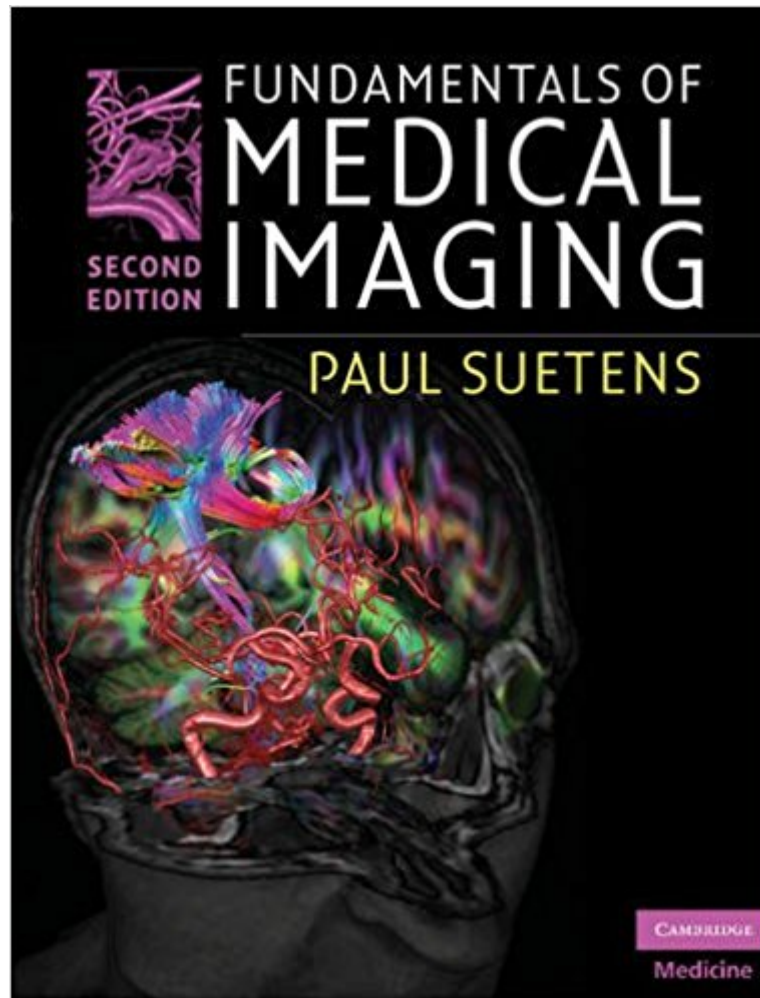




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Fundamentals Of Medical Imaging



Synopsis

Fundamentals of Medical Imaging, second edition, is an invaluable technical introduction to each imaging modality, explaining the mathematical and physical principles and giving a clear understanding of how images are obtained and interpreted. Individual chapters cover each imaging modality - radiography, CT, MRI, nuclear medicine and ultrasound - reviewing the physics of the signal and its interaction with tissue, the image formation or reconstruction process, a discussion of image quality and equipment, clinical applications and biological effects and safety issues.

Subsequent chapters review image analysis and visualization for diagnosis, treatment and surgery.

New to this edition:
• Appendix of questions and answers
• New chapter on 3D image visualization
• Advanced mathematical formulae in separate text boxes

Ancillary website containing 3D animations: www.cambridge.org/suetens
• Full colour illustrations throughout
Engineers, clinicians, mathematicians and physicists will find this an invaluable aid in understanding the physical principles of imaging and their clinical applications.

Book Information

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Customer Reviews

"Well-illustrated line drawings, clinical images, and photographs, more than 300 of which are in color....This book is written well and is easy to read. Depending on the reader's background, one can easily skip sections on mathematical theories on image formation (especially first-year medical physics students) but still get an understanding of various imaging modalities. Students interested in pursuing medical imaging will find this book helpful and should consider adding it to their private

collection. One of the features I like about this second edition is the set of questions on each chapter at the end of the book intended to test readers' knowledge. Anyone teaching undergraduate or graduate courses in medical imaging will greatly benefit from the material in this book." Doody's Review Service" This book will benefit anyone who wishes to learn about one or more of the established medical imaging techniques. It provides enough information to gain a working knowledge of the mathematics and physics of each technique. It also serves as a good starting point for someone wishing to specialise in a technique." Contemporary Physics

An invaluable technical introduction to each imaging modality, explaining mathematical and physical principles and how medical images are obtained and interpreted. Individual chapters on each modality review the physics of the signal, image formation/reconstruction, image quality and equipment, clinical applications, biological effects and safety issues.

It is a good text if you want all the detailed mathematical proofs and concepts. It's a little dense if you just want an introduction or overview.

I bought this because it was 'required' for my graduate level medical imaging course. It is however, not up to par for what a biomed. eng. or medical physicist would want/need. It is more appropriate for a medical student interested in imaging or a radiology resident. For the course, we quickly ended up referring to Jerry Prince's Medical Imaging Signals and Systems, which goes much more in depth into the math, yet explains it really well.

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