Introduction to Physics in Modern Medicine, Second Edition

Suzanne Amador Kane, Nancy Donaldson, Boris Gelman
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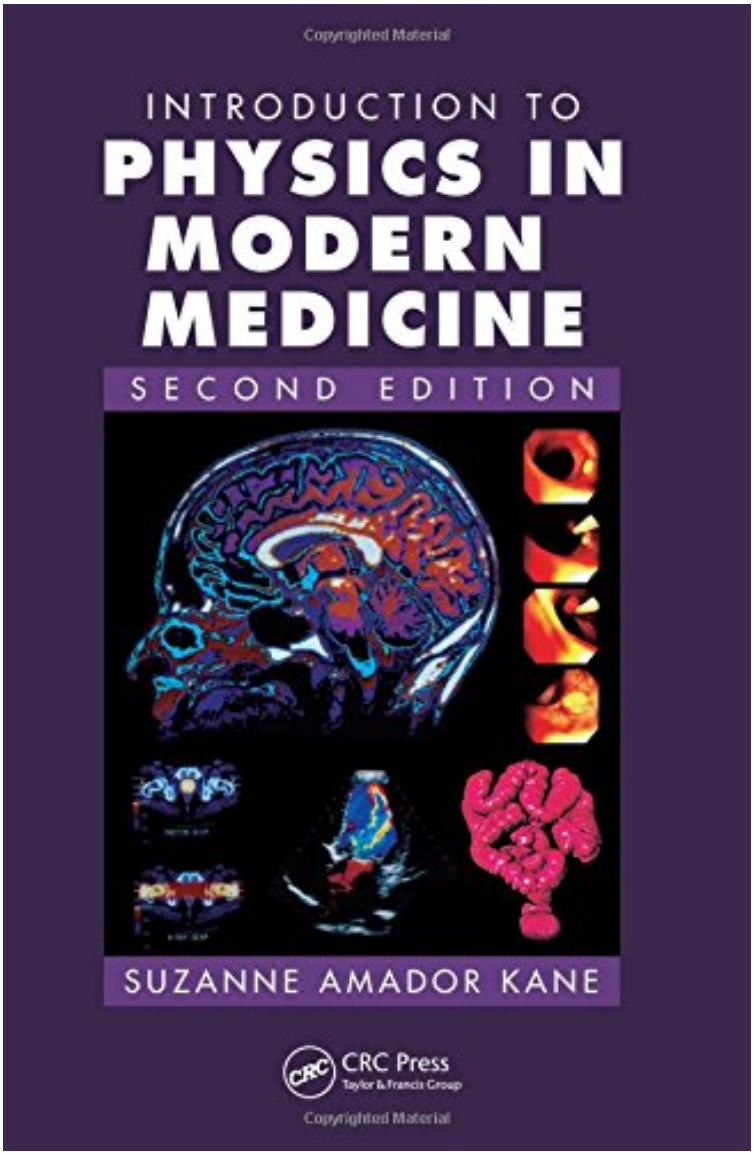

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Suzanne Amador Kane, Nancy Donaldson, Boris Gelman : Introduction to Physics in Modern Medicine, Second Edition before purchasing it in order to gage whether or not it would be worth my time, and all praised Introduction to Physics in Modern Medicine, Second Edition:

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the following review helpful. If your exams are based on this book, then it will get you across the line, just.By monteWhile the book covers the basics, if you want more in depth information then look elsewhere. A good starter but read on, read on1 of 1 people found the following review helpful. Fast deliveryBy ansthaNice and interesting book. Very comprehensive even to beginners in physics. It arrived very quickly. I was able to read ahead for class, before any homework was even assigned.

From x-rays to lasers to magnetic resonance imaging, developments in basic physics research have been transformed into medical technologies for imaging, surgery and therapy at an ever accelerating pace. Physics has joined with genetics and molecular biology to define much of what is modern in modern medicine. Covering a wide range of applications, Introduction to Physics in Modern Medicine, Second Edition builds on the bestselling original. Based on a course taught by the author, the book provides medical personnel and students with an exploration of the physics-related applications found in state-of-the-art medical centers. Requiring no previous acquaintance with physics, biology, or chemistry and keeping mathematics to a minimum, the application-dedicated chapters adhere to simple and self-contained qualitative explanations that make use of examples and illustrations. With an enhanced emphasis on digital imaging and computers in medicine, the text gives readers a fundamental understanding of the practical application of each concept and the basic science behind it. This book provides medical students with an excellent introduction to how physics is applied in medicine, while also providing students in physics with an introduction to medical physics. Each chapter includes worked examples and a complete list of problems and questions. That so much of the technology discussed in this book was the stuff of dreams just a few years ago, makes this book as fascinating as it is practical, both for those in medicine as well as those in physics who might one day discover that the project they are working on is basis for the next great medical application. This edition: Covers hybrid scanners for cancer imaging and the interplay of molecular medicine with imaging technologies such as MRI, CT and PET Looks at camera pills that can film from the inside upon swallowing and advances in robotic surgery devices Explores Intensity-Modulated Radiation Therapy, proton therapy, and other new forms of cancer treatment Reflects on the use of imaging technologies in developing countries

textbooks introducing this topic to students from non-scientific backgrounds need to present the fundamental theory in a manner that is easily grasped yet sufficiently in depth to enable the reader to appreciate its application to real problems. Introduction to Physics in Modern Medicine manages to tread this fine line admirably. To make this second edition up to date, the author describes a number of recent advances the contents are thoroughly grounded in well-explained practical examples. [a] well-researched book that renders complex subject matter thoroughly understandable and enjoyable.Contemporary Physics, Vol. 52, Issue 2, 2011About the AuthorSuzanne Amador Kane is a professor of physics and astronomy at Haverford College in Pennsylvania. Her research interests lie at the interface of soft condensed matter physics and biophysics, including biologically-inspired nanostructures, model membrane systems, self-assembly, liquid crystals and artificial evolution.