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applications have appeared in fields as diverse as medicine, industry, art, archaeology and the environmental sciences. This book is a set of extended lectures on basic and new topics, that gives a tutorial introduction to the field of modern nuclear physics. It is ideally suited to bridging the gap between the standard textbook material and the research literature, and provides the necessary foundation for acting as those who intend to work in any of the many disciplines where nuclear science and technology is going to play an important role in the future.