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Sommario/riassunto	This book is devoted to computer-based modeling in cardiology, by taking an educational point of view, and by summarizing knowledge from several, commonly considered delimited areas of cardiac research in a consistent way. First, the foundations and numerical techniques from mathematics are provided, with a particular focus on the finite

element and finite differences methods. Then, the theory of electric fields and continuum mechanics is introduced with respect to numerical calculations in anisotropic biological media. In addition to the presentation of digital image processing techniques, the following chapters deal with particular aspects of cardiac modeling: cardiac anatomy, cardiac electro physiology, cardiac mechanics, modeling of cardiac electro mechanics. This book was written for researchers in modeling and cardiology, for clinical cardiologists, and for advanced students.
