

"... an excellent overview of state-of-the-art methods developed to approach complex cardiovascular problems. It provides a way to model the integrative physiology aspects of the circulatory system—an aspect necessary when dealing with 'patient-specific' modeling."

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"... very well written ... large range of computation modeling approaches discussed in the book and that have been developed to address a broad spectrum of problems in the field of bioengineering."

—*Sundar Srinivasan, University of Washington*

Features

- Takes a multi-disciplinary modeling approach to a wide spectrum of bioengineering challenges
- Provides an overview of the current state of the art in topic areas with supporting case studies of real-world relevance to biomedical care
- Includes images that demonstrate the commonly unseen sides of the science and engineering about our body's functions and device's operations
- Illustrates the power of computational investigative approaches in the pursuit of improving the quality of life
- Focuses on device and device-tissue interaction

Arguably the first book of its kind, **Computational Bioengineering** explores the power of multidisciplinary computer modeling in bioengineering. Written by experts, the book examines the interplay of multiple governing principles underlying common biomedical devices and problems, bolstered by case studies. It shows you how to take advantage of the latest computational capabilities to deal with biomedical problems using an integrative approach. This approach fosters an integrative problem-solving mentality for the generation of new and novel solutions to future biomedical problems.



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