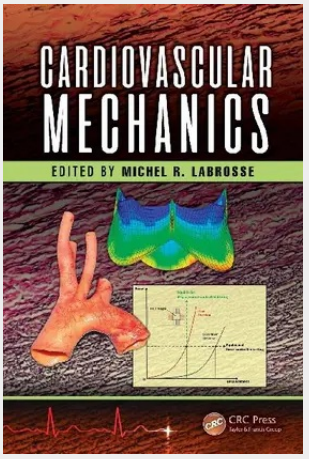
Labrosse

Cardiovascular Mechanics



The objective of this book is to illustrate in specific detail how cardiovascular mechanics stands as a common pillar supporting such different clinical successes as drugs for high blood pressure, prosthetic heart valves and coronary artery bypass grafting, among others. This information is conveyed through a comprehensive treatment of the overarching principles and theories that are behind mechanobiological processes, aortic and arterial mechanics, atherosclerosis, blood and microcirculation, hear valve mechanics, as well as medical devices and drugs. - Examines all major theoretical and practical aspects of mechanical forces related to the cardiovascular system. - Discusses a unique coverage of mechanical changes related to an aging cardiovascular system. - Provides an overview of experimental methods in cardiovascular mechanics. - Written by world-class researchers from Canada, the US and EU. - Extensive references are provided at the end of each chapter to enhance further study. Michel R. Labrosse is the founder of the Cardiovascular Mechanics Laboratory at the University of Ottawa, where he is a full professor within the Department of Mechanical Engineering. He has been an active researcher in academia along with being heavily associated with the University of Ottawa Heart Institute. He has authored or co-authored over 90 refereed communications, and supervised or co-supervised over 40 graduate students and post-docs.

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