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Sommario/riassunto	This book presents the state of the art in mathematical research on modelling the mechanics of biological systems – a science at the intersection between biology, mechanics and mathematics known as mechanobiology. The book gathers comprehensive surveys of the most significant areas of mechanobiology: cell motility and locomotion by shape control (Antonio DeSimone); models of cell motion and tissue growth (Benoît Perthame); numerical simulation of cardiac electromechanics (Alfio Quarteroni); and power-stroke-driven muscle contraction (Lev Truskinovsky). Each section is self-contained in terms of the biomechanical background, and the content is accessible to all readers with a basic understanding of differential equations and numerical analysis. The book disentangles the phenomenological complexity of the biomechanical problems, while at the same time addressing the mathematical complexity with invaluable clarity. The book is intended for a wide audience, in particular graduate students and applied mathematicians interested in entering this fascinating field.

