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   Autore   DeSimone Antonio

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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.