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Nota di contenuto	Preface; CONTENTS; Chapter 1 Articular Cartilage Biomechanics, Mechanobiology, and Tissue Engineering Eugene Koay and Kyriacos Athanasiou; Chapter 2 Techniques in Modern Gait Analysis and Their Application to the Study of Knee Osteoarthritis J. L. Astephen and K. J. Deluzio; Chapter 3 Finite Element Modeling of the Microarchitecture of Cancellous Bone: Techniques and Applications Amit Gefen; Chapter 4 Effect of Stress Ratio and Stress Frequency on Fatigue Behavior of Compact Bone S. Ishihara, M. Ota, B. L. Ding, C. Fleck, T. Goshima and D. Eifler Chapter 5 Kinematic Analysis Techniques and Their Application in Biomechanics Rita Stagni, Silvia Fantozzi, Andrea G. Cutti and Angelo Cappello Chapter 6 Structural Analysis of Skeletal Body Elements: Numerical and Experimental Methods Elisabetta M. Zanetti and Cristina Bignardi; Chapter 7 Indentation Technique for Simultaneous Estimation of Young's Modulus and Poisson's Ratio of Soft Tissues Pong-Chi Choi, Hang-Yin Ling and Yong-Ping Zheng Chapter 8 Wear Phenomena in Knee Prostheses and Their Finite Element Analyses Changhee Cho, Teruo Murakami, Yoshinori Sawae, Nobuo

Sommario/riassunto

Because of rapid developments in computer technology and computational techniques, advances in a wide spectrum of technologies, coupled with cross-disciplinary pursuits between technology and its application to human body processes, the field of biomechanics continues to evolve. Many areas of significant progress include dynamics of musculoskeletal systems, mechanics of hard and soft tissues, mechanics of bone remodeling, mechanics of blood and air flow, flow-prosthesis interfaces, mechanics of impact, dynamics of man-machine interaction, and more. Thus, the great breadth and significance
