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Altri autori (Persone)	WinkelsteinBeth A
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Nota di contenuto	Front Cover; Contents; Preface; Acknowledgments; Author; Contributors; Chapter 1 - Bone Biomechanics; Chapter 2 - Tendon and Ligament Biomechanics; Chapter 3 - Intervertebral Disc Cell Mechanics and Mechanobiology; Chapter 4 - A Multiscale Perspective on Structure, Mechanics, and Function of Skeletal Muscle; Chapter 5 - Skull Biomechanics; Chapter 6 - Temporomandibular Joint: Structure, Function, and Current Perspectives; Chapter 7 - Spine Biomechanics; Chapter 8 - Joint Mechanics of the Shoulder; Chapter 9 - Biomechanics of the Wrist and Hand Chapter 10 - Lower Limb Structure, Function, and Locomotion BiomechanicsChapter 11 - Musculoskeletal Cell Mechanics; Chapter 12 - Biomechanics of Musculoskeletal System Growth and Development; Chapter 13 - Gender and Aging: Considerations for Orthopaedics; Chapter 14 - Computational Approaches to Studying Normal and Pathological Mechanobiology of Whole Joints and Their Tissues; Chapter 15 - Clinical Gait Analysis; Chapter 16 - Injury Biomechanics; Chapter 17 - Injury Mechanisms of Several Common Sports-Related Orthopaedic Injuries Chapter 18 - Imaging Approaches to Quantify Tissue Structure and Function from the Microscale to the MacroscaleChapter 19 - Mechanical

	Stimulation for Functional Orthopaedic Tissue Engineering; Chapter 20 - Advances in Biomaterials for Clinical Orthopaedic Applications; Chapter 21 - Prosthetics and Orthotics; Back Cover
Sommario/riassunto	This book presents state-of-the-art developments of orthopedic biomechanics across tissues in the musculoskeletal system at all size scales and with direct relevance to engineering and clinical applications. Discussing the relationship between mechanical loading, function, and biological performance, it first reviews basic structure-function relationships for most major orthopedic tissue types followed by the most-relevant structures of the body. It then addresses multiscale modeling and biologic considerations. It concludes with a look at applications of biomechanics, focusing on recent advances in theory, technology and applied engineering approaches--Provided by publisher.