1. Record Nr.	UNINA9910437921903321
Titolo	Biomedical Imaging and Computational Modeling in Biomechanics [[electronic resource] /] / edited by Ugo Andreaus, Daniela Iacoviello
Pubbl/distr/stampa	Dordrecht : , : Springer Netherlands : , : Imprint : Springer, , 2013
ISBN	1-283-69797-1 94-007-4270-3
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (207 p.)
Collana	Lecture Notes in Computational Vision and Biomechanics, , 2212-9391 ; ; 4
Disciplina	571.430113
Soggetti	Biomedical engineering Mechanics Mechanics, Applied Optical data processing Biomaterials Biomedical Engineering and Bioengineering Theoretical and Applied Mechanics Image Processing and Computer Vision
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Preface -- A Review of Automated Techniques for Cervical Cell Image Analysis and Classification -- Modeling of Trabecular Architecture as Result of an Optimal Control Procedure -- The Kinematics of the Hip Joint with Femoroacetabular Impingement May Be Affected by the Thickness of the Articular Cartilage -- Image Based Model Development and Analysis of the Human Knee Joint; Hip Prostheses Computational Modeling: FEM Simulations Integrated with Fatigue Mechanical Tests -- Patient-Specific Modelling in Orthopedics: From Image to Surgery -- Micro-scale Analysis of Compositional and Mechanical Properties of Dentin Using Homotopic Measurements -- Microtomography and Its Application in Oral and Implant Research -- Biomedical Imaging and Computational Modeling in Cardiovascular Disease: Patient-Specific Applications Using Numerical Models -- Numerical Simulation of Viscous Flow Around Kayak: A Comparison of Different Design Models.

Sommario/riassunto   This book collects the state-of-art and new trends in image analysis and biomechanics. It covers a wide field of scientific and cultural topics, ranging from remodeling of bone tissue under the mechanical stimulus up to optimizing the performance of sports equipment, through the patient-specific modeling in orthopedics, microtomography and its application in oral and implant research, computational modeling in the field of hip prostheses, image based model development and analysis of the human knee joint, kinematics of the hip joint, micro-scale analysis of compositional and mechanical properties of dentin, automated techniques for cervical cell image analysis, and iomedical imaging and computational modeling in cardiovascular disease.   The book will be of interest to researchers, Ph.D students, and graduate students with multidisciplinary interests related to image analysis and understanding, medical imaging, biomechanics, simulation and modeling, experimental analysis.