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Collana	Materials Horizons: From Nature to Nanomaterials, , 2524-5392
Altri autori (Persone)	UniyalPiyush VermaAkarsh
Disciplina	610.28
Soggetti	Biomedical engineering Biomechanics Regenerative medicine Tissues Chemistry Materials science Biophysics Cell interaction Biomechanical Analysis and Modeling Regenerative Medicine and Tissue Engineering Materials Science Mechanobiological Cell Signaling
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di contenuto	Overview of materials science of soft and hard biological materials -- Biomechanics of human and animal skin using experimental approach -- Constitutive models and their computation implementation to predict the mechanical behaviour of soft tissues -- In silico modelling of non-Newtonian canalicular fluid flow in lacunar canalicular system of bone tissue- A machine learning approach -- Experimental and modelling approaches to predict the effect of disease on the soft tissue mechanics and material science -- Modelling of poroelastic behaviour of biological materials -- Mechano-biological assessment of tissue

engineered biomaterials -- Experimental methods to assess bone quality -- Computational techniques to predict bone fracture risk -- Strain rate dependent mechanical behaviour of bone -- Bone fracture risk prediction in tibia bone -- Computational modelling of mandibular bone implant.

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#### Sommario/riassunto

This book focuses on the important experimental techniques and modeling approaches, with their technological improvements and recent research advancements in the field of biomechanics. The major aim of this book is to cover all updated aspects of biomechanics and materials science of biological materials and its holistic domains including the history, source, formulations and applications. The emphasis is given on the understanding mechanics of soft and hard tissues. Also, many case studies are incorporated in this book that separates it from other related texts.

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