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Descrizione fisica	1 online resource (xv, 164 pages) : illustrations
Collana	Advances in Experimental Medicine and Biology, , 2214-8019 ; ; 1138
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Soggetti	Biotechnology Bioinformatics Computational and Systems Biology
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Nota di contenuto	Interactive 3D Digital Models for Anatomy and Medical Education -- Using Interactive 3D Visualisations in Neuropsychiatric Education -- New Tools in Education: Development and Learning Effectiveness of a Computer Application for use in a University Biology Curriculum -- Seeing with Sound: How Ultrasound Is Changing the Way We Look at Anatomy -- Creating a 3D Learning Tool for the Growth and Development of the Craniofacial Skeleton -- Medical Imaging and Facial Soft Tissue Thickness Studies for Forensic Craniofacial Approximation: A Pilot Study on Modern Cretans -- The affordances of 3D and 4D digital technologies for computerized facial depiction -- Auxiliary Tools for Enhanced Depth Perception in Vascular Structures -- A Visual Analytics Approach for Comparing Cohorts in Single-voxel Magnetic Resonance Spectroscopy Data -- Visual Analytics for the Representation, Exploration, and Analysis of High-Dimensional, Multi-Faceted Medical Data.
Sommario/riassunto	This edited book explores the use of technology to enable us to visualise the life sciences in a more meaningful and engaging way. It will enable those interested in visualisation techniques to gain a better understanding of the applications that can be used in visualisation, imaging and analysis, education, engagement and training. The reader

will be able to explore the utilisation of technologies from a number of fields to enable an engaging and meaningful visual representation of the biomedical sciences. This use of technology-enhanced learning will be of benefit for the learner, trainer and faculty, in patient care and the wider field of education and engagement. This second volume on Biomedical Visualisation will explore the use of a variety of visualisation techniques to enhance our understanding of how to visualise the body, its processes and apply it to a real world context. It is divided into three broad categories – Education; Craniofacial Anatomy and Applications and finally Visual Perception and Data Visualization. In the first four chapters, it provides a detailed account of the history of the development of 3D resources for visualisation. Following on from this will be three major case studies which examine a variety of educational perspectives in the creation of resources. One centres around neuropsychiatric education, one is based on gaming technology and its application in a university biology curriculum, and the last of these chapters examines how ultrasound can be used in the modern day anatomical curriculum. The next three chapters focus on a complex area of anatomy, and helps to create an engaging resource of materials focussed on craniofacial anatomy and applications. The first of these chapters examines how skulls can be digitised in the creation of an educational and training package, with excellent hints and tips. The second of these chapters has a real-world application related to forensic anatomy which examines skulls and soft tissue landmarks in the creation of a database for Cretan skulls, comparing it to international populations. The last three chapters present technical perspectives on visual perception and visualisation. By detailing visual perception, visual analytics and examination of multi-modal, multi-parametric data, these chapters help to understand the true scientific meaning of visualisation. The work presented here can be accessed by a wide range of users from faculty and students involved in the design and development of these processes, to those developing tools and techniques to enable visualisation in the sciences.
