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Note generali	Includes index.
Nota di contenuto	Computer Aided Oral & Maxillofacial Surgery -- Virtual Bone Surgery -- Medical Imaging Challenges Photogrammetry -- Computer Aided Tissue Engineering Scaffold Fabrication -- CAD Assembly Process for Bone Replacement Scaffolds in Computer-Aided Tissue Engineering -- Computational Design and Simulation of Tissue Engineering Scaffolds -- Conventional Manufacturing Process for Three-Dimensional Scaffolds -- Advanced Processes to Fabricate Scaffolds for Tissue Engineering -- Laser Printing Cells -- Two-Photon Polymerization for Tissue Engineering -- Selective Laser Sintering of Polymers and Polymer-Ceramic Composites -- Design, Fabrication and Physical Characterization of Scaffolds Made from Biodegradable Synthetic Polymers in Combination with RP Systems based on Melt Extrusion -- Molding in Medicine -- Organ Printing -- Skin Printing -- Nerve Regeneration & Spinal Injury Repair -- Cartilage Regeneration -- Structural Analysis of the Human Shoulder.
Sommario/riassunto	This new edition focuses on modeling and manufacturing in the field of prototyping and bio manufacturing. The principles utilized draw heavily from more traditional engineering fields including mechanical, industrial, civil (structures), electrical, and bio engineering. Written for engineers and academics seeking a comprehensive overview of virtual

prototyping and rapid prototyping, this book discusses in detail applications related to surgery, medical imaging, tissue engineering, bone replacement, and more. Seven new chapters address: Two-photon polymerization for tissue engineering Molding in medicine Organ printing Skin printing Nerve regeneration and spinal injury repair Cartilage regeneration And structural analysis of the human shoulder.