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Autore	Hug, Markus
Titolo	Der Auslander als Grundrechtstrager / Markus Hug
Pubbl/distr/stampa	Zürich : Schulthess pol., 1990
Descrizione fisica	XXX, 358 p. ; 24 cm
Disciplina	341.484
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Collocazione	DISSERTAZIONE A 1528
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Livello bibliografico	Monografia

2. Record Nr. UNINA9910143727503321

Titolo	Advanced manufacturing technology for medical applications [[electronic resource]] : reverse engineering, software conversion, and rapid prototyping / / edited by Ian Gibson
Pubbl/distr/stampa	Chichester, West Sussex, England ; ; Hoboken, NJ, USA, : J. Wiley, c2005
ISBN	1-280-35585-9 9786610355853 0-470-03398-3 1-60119-372-6 0-470-03284-7
Descrizione fisica	1 online resource (256 p.)
Collana	Engineering Research Series (REP)
Altri autori (Persone)	GibsonIan <1938->
Disciplina	610.28 610/.28
Soggetti	Medical technology Medical innovations Manufacturing processes Electronic books.
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Advanced Manufacturing Technology for Medical Applications; Contents; Contributors; 1 Rapid Prototyping for Medical Applications; 1.1 Overview; 1.2 Workshop on Medical Applications for Reverse Engineering and Rapid Prototyping; 1.3 Purpose of This Chapter (Overview); 1.4 Background on Rapid Prototyping; 1.5 Stereolithography and Other Resin-type Systems; 1.6 Fused Deposition Modelling and Selective Laser Sintering; 1.7 Droplet/Binder Systems; 1.8 Related Technology: Microsystems and Direct Metal Systems; 1.9 File Preparation; 1.10 Relationship with Other Technologies 1.11 Disadvantages with RP for Medical Applications1.12 Summary; Bibliography; 2 Role of Rapid Digital Manufacture in Planning and Implementation of Complex Medical Treatments; 2.1 Introduction; 2.2 Primer on Medical Imaging; 2.3 Surgical Planning; 2.3.1 Virtual planning; 2.3.2 Implementation of the plan; 2.4 RDM in Medicine; 2.4.1 RP-generated anatomical models; 2.4.2 Custom treatment devices with ADM; 2.5 The Future; 2.6 Conclusion; References; 3 Biomodelling; 3.1 Introduction; 3.2 Surgical Applications of Real Virtuality; 3.2.1 Cranio-maxillofacial biomodelling 3.2.1.1 Integration of biomodels with dental castings3.2.1.2 Use of biomodels to shape maxillofacial implants; 3.2.1.3 Use of biomodels to prefabricate templates and splints; 3.2.1.4 Use of biomodels in restorative prosthetics; 3.2.2 Use of real virtuality in customized cranio-maxillofacial prosthetics; 3.2.2.1 Computer mirroring techniques for the generation of prostheses; 3.2.2.2 Results of implantation; 3.2.2.3 Advantages of prefabricated customized cranioplastic implants; 3.2.3 Biomodel-guided stereotaxy; 3.2.3.1 Development of stereotaxy 3.2.3.2 Development of biomodel-guided stereotactic surgery3.2.3.3 Biomodel-guided stereotactic surgery with a template and markers; 3.2.3.4 Biomodel-guided stereotactic surgery using the D'Urso frame; 3.2.3.5 Utility of biomodel-guided stereotactic surgery; 3.2.4 Vascular biomodelling; 3.2.4.1 Biomodelling from CTA; 3.2.4.2 Biomodelling from MRA; 3.2.4.3 Clinical applications of vascular biomodels; 3.2.4.4 Vascular biomodelling: technical note; 3.2.5 Skull-base tumour surgery; 3.2.6 Spinal surgery; 3.2.6.1 Spinal biomodel stereotaxy; 3.2.6.2 Technical considerations in spinal biomodelling 3.2.7 Orthopaedic biomodelling3.3 Case Studies; References; 4 Three-dimensional Data Capture and Processing; 4.1 Introduction; 4.2 3D Medical Scan Process; 4.2.1 3D scanning; 4.2.1.1 Computed tomography imaging and its applications; 4.2.1.2 Magnetic resonance imaging and its applications; 4.2.1.3 Ultrasound imaging and its applications; 4.2.1.4 3D laser scanning; 4.2.2 3D reconstruction; 4.3 RE and RP in Medical Application; 4.3.1 Proposed method for RP model construction from scanned data; 4.3.2 Reconstruction software; 4.3.3 Accuracy issues; 4.4 Applications of Medical Imaging 4.5 Case Study
Sommario/riassunto	Advanced manufacturing technologies (AMTs) combine novel manufacturing techniques and machines with the application of information technology, microelectronics and new organizational practices within the manufacturing sector. They include ""hard"" technologies such as rapid prototyping, and ""soft"" technologies such as scanned point cloud data manipulation. AMTs contribute significantly to medical and biomedical engineering. The number of applications is rapidly increasing, with many important new products

now under development. Advanced Manufacturing Technology for Medical Applications<