Record Nr.	UNINA9910779506103321
Titolo	3D imaging [[electronic resource]]: theory, technology and applications / / Emerson H. Duke and Stephen R. Aguirre, editors
Pubbl/distr/stampa	New York, : Nova Science Publishers, c2009
ISBN	1-61122-922-7
Descrizione fisica	1 online resource (343 p.)
Collana	Computer Science, Technology and Applications
Altri autori (Persone)	DukeEmerson H AguirreStephen R
Disciplina	621.36/7
Soggetti	Three-dimensional imaging - Industrial applications Three-dimensional imaging in medicine Three-dimensional imaging in biology
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 and index.
Nota di contenuto	""3D IMAGING: THEORY, TECHNOLOGY AND APPLICATIONS ""; ""3D IMAGING: THEORY, TECHNOLOGY AND APPLICATIONS ""; ""CONTENTS""; ""PREFACE""; ""3D IMAGING OF ABDOMINAL AORTIC ANEURYSMS: TECHNIQUES AND APPLICATIONS ""; ""ABSTRACT""; "" Background""; ""Methods""; ""Results""; ""Conclusion""; ""1. INTRODUCTION ""; ""1.1 Incidence and Current Opinions ""; ""1.2 Medical Imaging""; ""2. 3D RECONSTRUCTION FROM CT SCANS ""; ""3. APPLICATIONS OF AAA 3D RECONSTRUCTIONS ""; ""4. NUMERICAL INVESTIGATIONS ""; ""4.1 Pre-Operative Planning for EVAR""; ""4.2 Stent-Graft Design"" ""4.3 Optimum Smoothing of 3D Models """"4.4 Determining AAA Asymmetry""; ""4.5 Improving Rupture Predictions""; ""4.6 Pre and Post-Operative Biomechanics""; ""4.7 Computer-Aided Design and Computer-Aided Manufacture ""; ""5. EXPERIMENTAL INVESTIGATIONS ""; ""5.1 In-Vitro Models ""; ""5.2 The Photoelastic Method ""; ""5.3 Improving Experimental Materials""; ""5.3.1 Material Selection, Development and Testing ""; ""5.3.2 Application to 3D Geometries ""; ""5.4 Experimental Rupture Testing""; ""6. CONCLUSION ""; ""5.4 Experimental Rupture Testing""; ""6. CONCLUSION ""; ""ACKNOWLEDGMENTS ""; ""REFERENCES "" ""3D IMAGING OF PHASE MICROSCOPIC OBJECTS BY DIGITAL HOLOGRAPHIC METHOD"""ABSTRACT ""; ""INTRODUCTION ""; ""1.

1.

VISUALIZATION ""; ""1.1 Classical Methods of Phase Microscopic Objects Visualization ""; ""1.1.1 Zernike phase-contrast method""; ""1.1.2 The method of interference contrast ""; ""1.2 Holography as the Method of Recoding and Reconstruction of Waves ""; ""1.3 Holographic Methods of Phase Microscopic Objects Visualization ""; ""1.3.1 History of holographic microscopy ""

""1.3.2 Holographic phase-contrast method (the method of holographic addition and subtraction in an interference fringe) """"1.3.3 The method of holographic interferometry in fringes of finite width ""; ""1.3.4 Comparison of the possibilities of the holographic methods for solution the problem of obtaining 3D images of phase microobjects ""; ""1.4 Digital Holographic Interference Microscope "": ""2. APPLICATION OF THE DIGITAL HOLOGRAPHIC MICROSCOPY FOR PHASE MICROOBJECTS STUDY""; ""2.1 DHIM Study of The 3D Morphology of Blood Erythrocytes"": ""2.2 DHIM Study of Thin Transparent Films "" ""CONCLUSION""""REFERENCES ""; ""ELECTRON MICROSCOPE TOMOGRAPHY IN STRUCTURAL BIOLOGY ""; ""ABSTRACT ""; ""INTRODUCTION""; ""DATA ACQUISITION""; ""PRE-PROCESSING: ALIGNMENT AND RESTORATION ""; ""TOMOGRAPHIC RECONSTRUCTION"": ""POST-PROCESSING AND INTERPRETATION OF TOMOGRAMS "": ""AN ILLUSTRATIVE EXAMPLE: EMT OF VACCINIA VIRUS ""; ""HIGH PERFORMANCE COMPUTING IN EMT ""; ""SOFTWARE TOOLS FOR EMT ""; ""CONCLUSION ""; ""ACKNOWLEDGMENTS""; ""REFERENCES""; ""THREE-DIMENSIONAL IMAGING AND PROCESSING""; ""ABSTRACT ""; ""1. INTRODUCTION ""; ""2. CURRENT STATUS AND PROBLEM ""

""3. 3D RECONSTRUCTION ALGORITHM ""