1. Record Nr. UNINA9910482975003321

Titolo	Medical Imaging and Augmented Reality [[electronic resource]] : 4th International Workshop Tokyo, Japan, August 1-2, 2008, Proceedings / / edited by Takeyoshi Dohi, Ichiro Sakuma, Hongen Liao
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2008
ISBN	3-540-79982-6
Edizione	[1st ed. 2008.]
Descrizione fisica	1 online resource (XVI, 441 p.)
Collana	Image Processing, Computer Vision, Pattern Recognition, and Graphics ; ; 5128
Disciplina	006.6 006.37
Soggetti	Optical data processing Health informatics Radiology Artificial intelligence Computer graphics Pattern recognition Image Processing and Computer Vision Health Informatics Imaging / Radiology Artificial Intelligence Computer Graphics Pattern Recognition
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Invited Contributions -- Towards a Medical Virtual Reality Environment for Minimally Invasive Cardiac Surgery -- Joint Registration and Segmentation of Serial Lung CT Images in Microendoscopy Molecular Image-Guided Therapy -- Perceptual Docking for Robotic Control -- Surgical Planning and Simulation -- An Integration of Statistical Deformable Model and Finite Element Method for Bone-Related Soft Tissue Prediction in Orthognathic Surgery Planning -- Automated

Preoperative Planning of Femoral Component for Total Hip Arthroplasty (THA) from 3D CT Images -- Validation of Viscoelastic and Nonlinear Liver Model for Needle Insertion from in Vivo Experiments -- Simulation of Active Cardiac Electromechanical Dynamics -- Wheelchair Propulsion Analysis System That Incorporates Human Skeletal Muscular Model Analyses on the Flat Floor and Slope -- Medical Image Computing -- Automatic Detection of Fiducial Marker Center Based on Shape Index and Curvedness -- Modality-Independent Determination of Vertebral Position and Rotation in 3D -- Coupled Meshfree-BEM Platform for Electrocardiographic Simulation: Modeling and Validations -- Source Localization of Subtopographies Decomposed by Radial Basis Functions -- Estimation of the Current Density in a Dynamic Heart Model and Visualization of Its Propagation -- Image Analysis -- Identification of Atrophy Patterns in Alzheimer's Disease Based on SVM Feature Selection and Anatomical Parcellation -- A Surface-Based Fractal Information Dimension Method for Cortical Complexity Analysis -- Wavelet-Based Compression and Segmentation of Hyperspectral Images in Surgery -- A Novel Level Set Based Shape Prior Method for Liver Segmentation from MRI Images -- Shape Modeling and Morphometry -- Statistical Shape Space Analysis Based on Level Sets -- Statistical Piecewise Assembled Model (SPAM) for the Representation of Highly Deformable Medical Organs -- Amygdala Surface Modeling with Weighted Spherical Harmonics -- Kalman Filtering for Frame-by-Frame CT to Ultrasound Rigid Registration -- Cardiac PET Motion Correction Using Materially Constrained Transform Models -- Image-Guided Robotics -- Image Guidance for Robotic Minimally Invasive Coronary Artery Bypass -- MRI-Compatible Rigid and Flexible Outer Sheath Device with Pneumatic Locking Mechanism for Minimally Invasive Surgery -- MR Compatible Tactile Sensing and Noise Analysis in a 1.5 Tesla MR System -- A Framework of the Non-invasive Ultrasound Theragnostic System -- Image-Guided Intervention -- In Vivo Evaluation of a Guidance System for Computer Assisted Robotized Needle Insertion Devoted to Small Animals -- Composite-Type Optical Fiberscope for Laser Surgery for Twin-to-Twin Transfusion Syndrome -- Surgical Manipulator with Balloon for Stabilizing Fetus in Utero under Ultrasound Guidance -- Investigation of Partial Directed Coherence for Hand-Eye Coordination in Laparoscopic Training -- A Virtual Reality Patient and Environments for Image Guided Diagnosis -- Interventional Imaging -- A Navigation System for Brain Surgery Using Computer Vision Technology -- Computer-Aided Delivery of High-Intensity Focused Ultrasound (HIFU) for Creation of an Atrial Septal Defect in Vivo -- Basic Study on Real-Time Simulation Using Mass Spring System for Robotic Surgery -- A Precise Robotic Ablation and Division Mechanism for Liver Resection -- Image Registration -- Fast Image Mapping of Endoscopic Image Mosaics with Three-Dimensional Ultrasound Image for Intrauterine Treatment of Twin-to-Twin Transfusion Syndrome -- Non-rigid 2D-3D Registration Based on Support Vector Regression Estimated Similarity Metric -- Real-Time Autostereoscopic Visualization of Registration-Generated 4D MR Image of Beating Heart -- Augmented Reality -- Realtime Organ Tracking for Endoscopic Augmented Reality Visualization Using Miniature Wireless Magnetic Tracker -- Fusion of Laser Guidance and 3-D Autostereoscopic Image Overlay for Precision-Guided Surgery -- Augmented Display of Anatomical Names of Bronchial Branches for Bronchoscopy Assistance -- Non-metal Slice Image Overlay Display System Used Inside the Open Type MRI -- Image Segmentation -- Extracting Curve Skeletons from Gray Value Images for Virtual Endoscopy -- Automatic Hepatic Vessel Segmentation Using Graphics

	Hardware -- Learning Longitudinal Deformations for Adaptive Segmentation of Lung Fields from Serial Chest Radiographs -- Automatic Extraction of Proximal Femur Contours from Calibrated X-Ray Images Using 3D Statistical Models -- Anisotropic Haralick Edge Detection Scheme with Application to Vessel Segmentation.
Sommario/riassunto	This book constitutes the refereed proceedings of the 4th International Workshop on Medical Imaging and Augmented Reality, MIAR 2008, held in Tokyo, Japan, in August 2008. The 44 revised full papers presented together with 3 invited papers were carefully reviewed and selected from 90 submissions. The papers are organized in topical sections on surgical planning and simulation, medical image computing, image analysis, shape modeling and morphometry, image-guided robotics, image-guided intervention, interventional imaging, image registration, augmented reality, and image segmentation.