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	Nota di contenuto	Simultaneous Tensor and Fiber Registration (STFR) for Diffusion Tensor Images of the Brain -- Real-Time Marker-Free Patient Registration and Image-Based Navigation Using Stereovision for Dental Surgery -- Segmentation of 3D Transesophageal Echocardiograms by Multi-cavity Active Shape Model and Gamma Mixture Model -- Automatic and Real-Time Identification of Breathing Pattern from Ultrasound Liver Images -- Simultaneous Tracking, 3D Reconstruction and Deforming Point Detection for Stereoscope Guided Surgery -- Hybrid Multimodal

Deformable Registration with a Data-Driven Deformation Prior -- Planning of Middle Hepatic Vein-Guided Hemihepatectomy: Resection Pathway Construction and Optimization -- Cascaded Shape Regression for Automatic Prostate Segmentation from Extracorporeal Ultrasound Images -- Evaluation of Endoscopic Image Enhancement for Feature Tracking: A New Validation Framework -- Intensity-Based 3D-2D Mesh-to-Image Registration Using Mesh-Based Digitally Reconstructed Radiography -- Toward Accurate and Robust 2-D/3-D Registration of Implant Models to Single-Plane Fluoroscopy -- Ultrasound Image-Guided Mapping of Endoscopic Views on a 3D Placenta Model: A Tracker-Less Approach -- An Augmented Reality Approach for Initializing 2D/3D Registration -- Surface Reconstruction from Tracked Endoscopic Video Using the Structure from Motion Approach -- Towards CT Enhanced Ultrasound Guidance for Off-pump Beating Heart Mitral Valve Repair -- A Bayesian Approach for Construction of Sparse Statistical Shape Models Using Dirichlet Distribution -- Brain-Cloud: A Generalized and Flexible Registration Framework for Brain MR Images -- Realtime Wide-Baseline Registration of the Uterus in Monocular Laparoscopic Videos -- 3D Robotic Catheter Shape Reconstruction and Localisation Using Appearance Priors and Adaptive C-Arm Positioning -- Uncertainty-Encoded Augmented Reality for Robot-Assisted Partial Nephrectomy: A Phantom Study -- Quantized Local Edge Distribution: A Descriptor for B-mode Ultrasound Images -- Registration of Preoperative Liver Model for Laparoscopic Surgery from Intraoperative 3D Acquisition -- Volume Visualization for Neurovascular Augmented Reality Surgery -- Reinforcement Learning Based Model Selection and Parameter Estimation for Pharmacokinetic Analysis in Drug Selection -- Delineating 3D Angiogenic Sprouting in OCT Images via Multiple Active Contours -- The Role of Augmented Reality in Training the Planning of Brain Tumor Resection -- Matching Functional Connectivity Patterns for Spatial Correspondence Detection in fMRI Registration -- Calibration and Stereo Tracking of a Laparoscopic Ultrasound Transducer for Augmented Reality in Surgery -- Evaluation of Multiple Voxel-Based Morphometry Approaches and Applications in the Analysis of White Matter Changes in Temporal Lobe Epilepsy.

Sommario/riassunto	This book constitutes the refereed proceedings of two workshops MAIR/AE-CAI 2013, held in conjunction with MICCAI 2013, held in Nagoya, Japan, in September 2013. The 29 revised full papers presented were carefully reviewed and selected from 44 submissions. The papers cover a wide range of topics addressing the main research efforts in the fields of medical image formation, analysis and interpretation, augmented reality and visualization, computer assisted intervention, interventional imaging, image-guided robotics, image-guided intervention, surgical planning and simulation, systematic extra- and intra-corporeal imaging modalities, and general biological and neuroscience image computing.