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Titolo	Computational Methods and Clinical Applications for Spine Imaging [[electronic resource]] : Third International Workshop and Challenge, CSI 2015, Held in Conjunction with MICCAI 2015, Munich, Germany, October 5, 2015, Proceedings // edited by Tomaž Vrtovec, Jianhua Yao, Ben Glocker, Tobias Klinder, Alejandro Frangi, Guoyan Zheng, Shuo Li
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Descrizione fisica	1 online resource (X, 159 p. 61 illus.)
Collana	Image Processing, Computer Vision, Pattern Recognition, and Graphics ; ; 9402
Disciplina	616.730754
Soggetti	Optical data processing Pattern recognition Computer graphics Artificial intelligence Computer simulation Algorithms Image Processing and Computer Vision Pattern Recognition Computer Graphics Artificial Intelligence Simulation and Modeling Algorithm Analysis and Problem Complexity
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Automated Pedicle Screw Size and Trajectory Planning by Maximization of Fastening Strength -- Automatic Modic Changes Classification in Spinal MRI -- Patient Registration via Topologically Encoded Depth Projection Images in Spine Surgery -- Automatic Localisation of Vertebrae in DXA Images Using Random Forest Regression Voting -- Robust CT to US 3D-3D Registration by Using Principal Component

Analysis and Kalman Filtering -- Cortical Bone Thickness Estimation in CT Images: A Model-Based Approach Without Profile Fitting -- Multi-Atlas Segmentation with Joint Label Fusion of Osteoporotic Vertebral Compression Fractures on CT -- Statistical Shape Model Construction of Lumbar Vertebrae and Intervertebral Discs in Segmentation for Discectomy Surgery Simulation -- Automatic Intervertebral Discs Localization and Segmentation: A Vertebral Approach -- Segmentation of Intervertebral Discs in 3D MRI Data Using Multi-Atlas Based Registration -- Deformable Model-Based Segmentation of Intervertebral Discs from MR Spine Images by Using the SSC Descriptor -- 3D Intervertebral Disc Segmentation from MRI Using Supervoxel-Based CRFs -- Automatic Intervertebral Disc Localization and Segmentation in 3D MR Images Based on Regression Forests and Active Contours -- Localization and Segmentation of 3D Intervertebral Discs from MR Images via a Learning Based Method: A Validation Framework -- Automated Intervertebral Disc Segmentation Using Probabilistic Shape Estimation and Active Shape Models. .

Sommario/riassunto

This book constitutes the refereed proceedings of the Third International Workshop and Challenge on Computational Methods and Clinical Applications for Spine Imaging, CSI 2015, held in conjunction with MICCAI 2015, in Munich, Germany, in October 2015. The 9 workshop papers and 6 challenge contributions were carefully reviewed and selected for inclusion in this volume. The papers cover all major aspects related to spine imaging.
