

# Contents

Statistical Analysis of Relative Pose of the Thalamus in Preterm Neonates . . .	1
<i>Yi Lao, Jie Shi, Yalin Wang, Rafeal Ceschin, Darryl Hwang, M.D. Nelson, Ashok Panigrahy, and Natasha Leporé</i>	
Forming the Interface Between Doctor and Designing Engineer . . . . .	10
<i>Christine Schoene, Philipp Sembdner, Stefan Holzhausen, and Ralph Stelzer</i>	
Image-Based Bronchoscopy Navigation System Based on CT and C-arm Fluoroscopy . . . . .	15
<i>Teena Steger, Klaus Drechsler, and Stefan Wesarg</i>	
Path Planning for Multi-port Lateral Skull Base Surgery Based on First Clinical Experiences . . . . .	23
<i>Meike Becker, Stefan Hansen, Stefan Wesarg, and Georgios Sakas</i>	
On-Line Lumen Centre Detection in Gastrointestinal and Respiratory Endoscopy . . . . .	31
<i>Carles Sánchez, Jorge Bernal, Debora Gil, and F. Javier Sánchez</i>	
Automatic Markov Random Field Segmentation of Susceptibility-Weighted MR Venography . . . . .	39
<i>Silvain Bériault, Marika Archambault-Wallenburg, Abbas F. Sadikot, D. Louis Collins, and G. Bruce Pike</i>	
MR Enterography Image Fusion in Small Bowel Analysis . . . . .	48
<i>Juan J. Cerrolaza, Nabile M. Safdar, Raymond W. Sze, and Marius George Linguraru</i>	
Landmark-Based Surgical Navigation . . . . .	57
<i>Adrian Schneider, Christian Baumberger, Mathias Griessen, Simon Pezold, Jörg Beinemann, Philipp Jürgens, and Philippe C. Cattin</i>	
Structure-Guided Nonrigid Registration of CT–MR Pelvis Scans with Large Deformations in MR-Based Image Guided Radiation Therapy . . .	65
<i>David Rivest-Hénault, Peter Greer, Jurgen Fripp, and Jason Dowling</i>	
Placement of External Ventricular Drains Using an Average Model . . . . .	74
<i>I. Reinertsen, A.S. Jakola, O. Solheim, F. Lindseth, T. Selbekk, and G. Unsgaard</i>	
Automated Kidney Detection and Segmentation in 3D Ultrasound . . . . .	83
<i>Matthias Noll, Xin Li, and Stefan Wesarg</i>	

Surgical Workflow Analysis, Design and Development of an Image-Based Navigation System for Endoscopic Interventions . . . . .	91
<i>Frederic Perez, Sergio Vera, Gloria Fernández-Esparrach, Henry Córdova, Raúl San José Estépar, Javier Herrero Jover, and Miguel Angel González Ballester</i>	
Automatic Optimization of Depth Electrode Trajectory Planning . . . . .	99
<i>Rina Zelmann, Silvain Beriault, Kelvin Mok, Claire Haegelen, Jeff Hall, Bruce Pike, Andre Olivier, and D. Louis Collins</i>	
Towards a Clinical Stereoscopic Augmented Reality System for Laparoscopic Surgery . . . . .	108
<i>Xin Kang, Jihun Oh, Emmanuel Wilson, Ziv Yaniv, Timothy D. Kane, Craig A. Peters, and Raj Shekhar</i>	
Automatic Detection of Misalignment in Rigid 3D-2D Registration . . . . .	117
<i>Uroš Mitrović, Žiga Špiclin, Boštjan Likar, and Franjo Pernuš</i>	
Prototype Design and Phantom Evaluation of a Device for Co-registered MRI/TRUS Imaging of the Prostate . . . . .	125
<i>Andriy Fedorov, Sang-Eun Song, Tina Kapur, Robert Owen, Emily Neubauer Sugar, Paul Nguyen, William M. Wells III, and Clare M. Tempny</i>	
Modelling Smooth Intensity Changes in the Putamen for Diagnosis of Sporadic Creutzfeldt-Jakob Disease. . . . .	134
<i>S. Bouyagoub, I.C. Cimpin, S.A. Hojjatoleslami, A. Kume, Y.H. Mah, and A.C.F. Colchester</i>	
Inter-slice Correspondence for 2D Ultrasound-Guided Procedures . . . . .	143
<i>Matthew Toews, Alexandra J. Golby, and William M. Wells III</i>	
First Clinical Experience with BMD Assessment in Vertebrae Using Dual-Energy CT . . . . .	151
<i>Stefan Wesarg, Julian Wichmann, Christian Booz, Marius Erdt, Konstantinos Kafchitsas, and M. Fawad Khan</i>	
<b>Author Index . . . . .</b>	<b>161</b>

Clinical Image-Based Procedures. Translational  
Research in Medical Imaging  
Second International Workshop, CLIP 2013, Held in  
Conjunction with MICCAI 2013, Nagoya, Japan,  
September 22, 2013, Revised Selected Papers  
Erdt, M.; Linguraru, M.G.; Oyarzun Laura, C.; Shekhar, R.;  
Wesarg, S.; González Ballester, M.Á.; Drechsler, K. (Eds.)  
2014, X, 162 p. 91 illus., Softcover  
ISBN: 978-3-319-05665-4