

Contents

Liver and Pancreas - Ablation, Perfusion, and Segmentation

Parameter Estimation for Personalization of Liver Tumor Radiofrequency Ablation.	3
<i>Chloé Audigier, Tommaso Mansi, Hervé Delingette, Saikiran Rapaka, Viorel Mihalef, Daniel Carnegie, Emad Boctor, Michael Choti, Ali Kamen, Dorin Comaniciu, and Nicholas Ayache</i>	
Automatic Identification and Localisation of Potential Malignancies in Contrast-Enhanced Ultrasound Liver Scans Using Spatio-Temporal Features . . .	13
<i>Spyridon Bakas, Dimitrios Makris, Paul S. Sidhu, and Katerina Chatzimichail</i>	
A Semi-automated Toolkit for Analysis of Liver Cancer Treatment Response Using Perfusion CT.	23
<i>Elina Naydenova, Amalia Cifor, Esme Hill, Jamie Franklin, Ricky A. Sharma, and Julia A. Schnabel</i>	
Parameter Comparison Between Fast-Water-Exchange-Limit-Constrained Standard and Water-Exchange-Modified Dual-Input Tracer Kinetic Models for DCE-MRI in Advanced Hepatocellular Carcinoma	33
<i>Sang Ho Lee, Koichi Hayano, Dushyant V. Sahani, Andrew X. Zhu, and Hiroyuki Yoshida</i>	
Kinetic Textural Biomarker for Predicting Survival of Patients with Advanced Hepatocellular Carcinoma After Antiangiogenic Therapy by Use of Baseline First-Pass Perfusion CT	48
<i>Sang Ho Lee, Koichi Hayano, Dushyant V. Sahani, Andrew X. Zhu, and Hiroyuki Yoshida</i>	
Feasibility of Single-Input Tracer Kinetic Modeling with Continuous-Time Formalism in Liver 4-Phase Dynamic Contrast-Enhanced CT	62
<i>Sang Ho Lee, Yasuji Ryu, Koichi Hayano, and Hiroyuki Yoshida</i>	
Metastatic Liver Tumor Segmentation Using Texture-Based Omni-Directional Deformable Surface Models	74
<i>Eugene Vorontsov, Nadine Abi-Jaoudeh, and Samuel Kadoury</i>	
Automated Navigator Tracker Placement for MRI Liver Scans	84
<i>Takao Goto and Satoshi Ito</i>	

Pancreatic Blood Flow Measurements in the Pig Pancreatitis Model Using Perfusion CT with Deconvolution Method	94
<i>Yoshihisa Tsuji, Kazutaka Yamada, Miori Kisimoto, Shujiro Yazumi, Hiroyoshi Isoda, and Tsutomu Chiba</i>	

A Bottom-Up Approach for Automatic Pancreas Segmentation in Abdominal CT Scans	103
<i>Amal Farag, Le Lu, Evrim Turkbey, Jiamin Liu, and Ronald M. Summers</i>	

Gastrointestinal Tract - Crohn's Disease

Spatially-Constrained Probability Distribution Model of Incoherent Motion (SPIM) in Diffusion Weighted MRI Signals of Crohn's Disease	117
<i>Sila Kurugol, Moti Freiman, Onur Afacan, Jeannette M. Perez-Rossello, Michael J. Callahan, and Simon K. Warfield</i>	

Semi-automatic Crohn's Disease Severity Estimation on MR Imaging	128
<i>Peter J. Schöffler, Dwarikanath Mahapatra, Robiel Naziroglu, Zhang Li, Carl A.J. Puylaert, Rado Andriantsimiavona, Franciscus M. Vos, Doug A. Pendsé, C. Yung Nio, Jaap Stoker, Stuart A. Taylor, and Joachim M. Buhmann</i>	

Combining Multiple Expert Annotations Using Semi-supervised Learning and Graph Cuts for Crohn's Disease Segmentation	139
<i>Dwarikanath Mahapatra, Peter J. Schöffler, Jeroen A.W. Tielbeek, Carl Puylaert, Jesica C. Makanyanga, Alex Menys, Rado Andriantsimiavona, Jaap Stoker, Stuart A. Taylor, Franciscus M. Vos, and Joachim M. Buhmann</i>	

Gastrointestinal Tract - Colonoscopy, Colonography

Automatic Assessment of Image Informativeness in Colonoscopy	151
<i>Nima Tajbakhsh, Changching Chi, Haripriya Sharma, Qing Wu, Suryakanth R. Gurudu, and Jianming Liang</i>	

Information-Preserving Pseudo-Enhancement Correction for Non-Cathartic Low-Dose Dual-Energy CT Colonography	159
<i>Janne J. Näppi, Rie Tachibana, Daniele Regge, and Hiroyuki Yoshida</i>	

Application of Pseudo-enhancement Correction to Virtual Monochromatic CT Colonography	169
<i>Rie Tachibana, Janne J. Näppi, and Hiroyuki Yoshida</i>	

A Novel Minimal Surface Overlay Model for the Whole Colon Wall Segmentation	179
<i>Huafeng Wang, Wenfeng Song, Katherine Wei, Yuan Cao, Haixia Pan, Ming Ma, Jiang Huang, Guangming Mao, and Zhengrong Liang</i>	

A Unified Framework for Automated Colon Segmentation	188
<i>Marwa Ismail, Aly Farag, Salwa Elshzaly, Robert Curtin, and Robert Falk</i>	
A Novel Visualization Technique for Virtual Colonoscopy Using One-Sided Transparency	199
<i>Robert Curtin, Aly Farag, Salwa Elshzaly, Marwa Ismail, Charles Sites, and Robert Falk</i>	
Abdominal Operation Planning - Registration, Segmentation	
Total Variation Regularization of Displacements in Parametric Image Registration	211
<i>Valeriy Vishnevskiy, Tobias Gass, Gábor Székely, and Orcun Goksel</i>	
A Bilinear Model for Temporally Coherent Respiratory Motion	221
<i>Frank Preiswerk and Philippe C. Cattin</i>	
A New Tube Detection Filter for Abdominal Aortic Aneurysms	229
<i>Erik Smistad, Reidar Brekken, and Frank Lindseth</i>	
Total Variation Based 3D Reconstruction from Monocular Laparoscopic Sequences	239
<i>Jan Marek Marcinczak and Rolf-Rainer Grigat</i>	
MRI-Based Thickness Analysis of Bladder Cancer: A Pilot Study	248
<i>Xi Zhang, Yang Liu, Dan Xiao, Guopeng Zhang, Qimei Liao, and Hongbing Lu</i>	
Three-Dimensional Respiratory Deformation Processing for CT Vessel Images Using Angiographic Images	257
<i>Shohei Suganuma, Yuya Takano, Takashi Ohnishi, Hideyuki Kato, Yoshihiko Ooka, and Hideaki Haneishi</i>	
Special Topics	
Reconstruction Method by Using Sparse and Low-Rank Structures for Fast 4D-MRI Acquisition	269
<i>Yukinojo Kitakami, Takashi Ohnishi, Yoshitada Masuda, Koji Matsumoto, and Hideaki Haneishi</i>	
Combined Homogeneous Region Localization and Automated Evaluation of Radiation Dose Dependent Contrast-to-Noise Ratio in Dual Energy Abdominal CT	278
<i>Minsoo Chun and Jong-Hyo Kim</i>	
Modeling and Analysis of Bioimpedance Measurements	287
<i>Alexander Danilov, Vasily Kramarenko, and Alexandra Yurova</i>	
Author Index	295

Abdominal Imaging. Computational and Clinical
Applications

6th International Workshop, ABDI 2014, Held in
Conjunction with MICCAI 2014, Cambridge, MA, USA,
September 14, 2014.

Yoshida, H.; Näppi, J.J.; Saini, S. (Eds.)

2014, XIII, 296 p. 139 illus., Softcover

ISBN: 978-3-319-13691-2