

Table of Contents

Multimodal Neuroimaging Predictors for Cognitive Performance Using Structured Sparse Learning	1
<i>Jingwen Yan, Shannon L. Risacher, Sungeun Kim, Jacqueline C. Simon, Taiyong Li, Jing Wan, Hua Wang, Heng Huang, Andrew J. Saykin, Li Shen, for the Alzheimer's Disease Neuroimaging Initiative</i>	
Combining DTI and MRI for the Automated Detection of Alzheimer's Disease Using a Large European Multicenter Dataset	18
<i>Martin Dyrba, Michael Ewers, Martin Wegrzyn, Ingo Kilimann, Claudia Plant, Annahita Oswald, Thomas Meindl, Michela Pievani, Arun L.W. Bokde, Andreas Fellgiebel, Massimo Filippi, Harald Hampel, Stefan Klöppel, Karlheinz Hauenstein, Thomas Kirste, Stefan J. Teipel, and the EDSD Study Group</i>	
Genetics of Path Lengths in Brain Connectivity Networks: HARDI-Based Maps in 457 Adults	29
<i>Neda Jahanshad, Gautam Prasad, Arthur W. Toga, Katie L. McMahon, Greig I. de Zubicaray, Nicholas G. Martin, Margaret J. Wright, and Paul M. Thompson</i>	
Connectivity Network Breakdown Predicts Imminent Volumetric Atrophy in Early Mild Cognitive Impairment	41
<i>Talia M. Nir, Neda Jahanshad, Arthur W. Toga, Clifford R. Jack, Michael W. Weiner, Paul M. Thompson, and the Alzheimer's Disease Neuroimaging Initiative (ADNI)</i>	
Deconfounding the Effects of Resting State Activity on Task Activation Detection in fMRI	51
<i>Burak Yoldemir, Bernard Ng, and Rafeef Abugharbieh</i>	
Hyperbolic Ricci Flow and Its Application in Studying Lateral Ventricle Morphometry	61
<i>Jie Shi, Paul M. Thompson, and Yalin Wang</i>	
Do We Really Need Robust and Alternative Inference Methods for Brain MRI?	77
<i>Bennett A. Landman, Xue Yang, and Hakmook Kang</i>	

Sparse Patch-Based Label Fusion for Multi-Atlas Segmentation	94
<i>Daoqiang Zhang, Qimiao Guo, Guorong Wu, and Dinggang Shen</i>	
How Many Templates Does It Take for a Good Segmentation?: Error Analysis in Multiatlas Segmentation as a Function of Database Size	103
<i>Suyash P. Awate, Peihong Zhu, and Ross T. Whitaker</i>	
A Generative Model for Probabilistic Label Fusion of Multimodal Data	115
<i>Juan Eugenio Iglesias, Mert Rory Sabuncu, and Koen Van Leemput</i>	
Spatial Normalization of Diffusion Tensor Images with Voxel-Wise Reconstruction of the Diffusion Gradient Direction	134
<i>Wei Liu, Xiaozheng Liu, Xiaofu He, Zhenyu Zhou, Ying Wen, Yongdi Zhou, Bradley S. Peterson, and Dongrong Xu</i>	
Automatic Population HARDI White Matter Tract Clustering by Label Fusion of Multiple Tract Atlases	147
<i>Yan Jin, Yonggang Shi, Liang Zhan, Junning Li, Greig I. de Zubicaray, Katie L. McMahon, Nicholas G. Martin, Margaret J. Wright, and Paul M. Thompson</i>	
Comparative Characterisation of Susceptibility Weighted MRI for Brain White Matter Lesions in MS	157
<i>Maddalena Strumia, Constantin Anastasopoulos, Irina Mader, Jürgen Henning, Li Bai, and Stathis Hadjide metriou</i>	
Constructing Fiber Atlases for Functional ROIs via fMRI-Guided DTI Image Registration	167
<i>Tuo Zhang, Lei Guo, Hanbo Chen, Xintao Hu, Kaiming Li, and Tianming Liu</i>	
Structural Feature Selection for Connectivity Network-Based MCI Diagnosis	175
<i>Biao Jie, Daoqiang Zhang, Chong-Yaw Wee, and Dinggang Shen</i>	
Groupwise Segmentation Improves Neuroimaging Classification Accuracy	185
<i>Yaping Wang, Hongjun Jia, Pew-Thian Yap, Bo Cheng, Chong-Yaw Wee, Lei Guo, and Dinggang Shen</i>	
DWI Denoising Using Spatial, Angular, and Radiometric Filtering	194
<i>Pew-Thian Yap and Dinggang Shen</i>	

MRI Estimation of T_1 Relaxation Time Using a Constrained Optimization Algorithm	203
<i>Fang Cao, Olivier Commowick, Elise Bannier, Jean-Christophe Ferré, Gilles Edan, and Christian Barillot</i>	
Robust Cerebral Blood Flow Map Estimation in Arterial Spin Labeling	215
<i>Camille Maumet, Pierre Maurel, Jean-Christophe Ferré, and Christian Barillot</i>	
Author Index	225