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   Nota di contenuto   Part I Acquisition of Diffusion MRI: Comparing Simultaneous Multi-slice
                       Diffusion Acquisitions by Y.Rathi et al -- Effect of Data Acquisition and
                       Analysis Method on Fiber Orientation Estimation in Diffusion MRI by B.
                       Wilkins et al -- Model-based super-resolution of diffusion MRI by A.
                       Tobisch et al -- A quantitative evaluation of errors induced by reduced
                       field-of-view in diffusion tensor imaging by J.Hering et al -- Part II

Diffusion MRI Modeling: The Diffusion Dictionary in the Human Brain is Short: Rotation Invariant Learning of Basis Functions by M.Reisert et al -- Diffusion Propagator Estimation Using Radial Basis Functions by Y. Rathi et al -- A Framework for ODF Inference by using Fiber Tract Adaptive MPG Selection by H.Hontani et al -- Non-Negative Spherical Deconvolution (NNSD) for Fiber Orientation Distribution Function Estimation by J.Cheng et al -- Part III Tractography: A Novel Riemannian Metric for Geodesic Tractography in DTI by A.Fuster et al -- Fiberfox: An extensible system for generating realistic white matter software phantoms by P.F.Neher et al -- Choosing a Tractography Algorithm: On the Effects of Measurement Noise by A.Reichenbach et al -- Uncertainty in Tractography via Tract Confidence Regions by C.J.Brown et al -- Estimating Uncertainty in White Matter Tractography Using Wild Non-Local Bootstrap by P -- T. Yap et al -- Part IV Group Studies and Statistical Analysis: Groupwise Deformable Registration of Fiber Track Sets using Track Orientation Distributions by D. Christiaens et al -- Groupwise registration for correcting subject motion and eddy current distortions in diffusion MRI using a PCA based dissimilarity metric by W. Huizinga et al -- Fiber Based Comparison of Whole Brain Tractographies with Application to Amyotrophic Lateral Sclerosis by G. Zimmerman-Moreno et al -- Statistical Analysis of White Matter Integrity for the Clinical Study of Typical Specific Language Impairment in Children by E.Vallée et al -- Part V Brain Connectivity: Disrupted Brain Connectivity in Alzheimer's Disease: Effects of Network Thresholding: M. Daianu et al -- Rich Club Analysis of Structural Brain Connectivity at 7 Tesla versus 3 Tesla: E. Dennis et al -- Coupled Intrinsic Connectivity: A Principled Method for Exploratory Analysis of Paired Data: D. Scheinost et al -- Power Estimates for Voxel-Based Genetic Association Studies using Diffusion Imaging: N. Jahanshad et al -- Global changes in the connectome in autism spectrum diseases: C. Jonas Goch et al.

| Sommario/riassunto | This volume contains the proceedings from two closely related workshops: Computational Diffusion MRI (CDMRI'13) and Mathematical Methods from Brain Connectivity (MMBC'13), held under the auspices of the 16th International Conference on Medical Image Computing and Computer Assisted Intervention, which took place in Nagoya, Japan, September 2013. Inside, readers will find contributions ranging from mathematical foundations and novel methods for the validation of inferring large-scale connectivity from neuroimaging data to the statistical analysis of the data, accelerated methods for data acquisition, and the most recent developments on mathematical diffusion modeling. This volume offers a valuable starting point for anyone interested in learning computational diffusion MRI and mathematical methods for brain connectivity as well as offers new perspectives and insights on current research challenges for those currently in the field. It will be of interest to researchers and practitioners in computer science, MR physics, and applied mathematics. |