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Soggetti	Image processing - Digital techniques Computer vision Artificial intelligence Education - Data processing Social sciences - Data processing Computer science - Mathematics Computer Imaging, Vision, Pattern Recognition and Graphics Artificial Intelligence Computers and Education Computer Application in Social and Behavioral Sciences Mathematics of Computing
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Nota di contenuto	Neural Spherical Harmonics for structurally coherent continuous representation of diffusion MRI signal -- A Unified Learning Model for Estimating Fiber Orientation Distribution Functions on Heterogeneous Multi-shell Diffusion-weighted MRI -- Diffusionphantomstudyof fiber crossings at varied angles reconstructed with ODF-Fingerprinting -- Improving Multi-Tensor Fitting with Global Information from Track

Orientation Density Imaging -- BundleSeg: A versatile, reliable and reproducible approach to white matter bundle segmentation -- Automated Mapping of Residual Distortion Severity in Diffusion MRI -- Automatic fast and reliable recognition of a small brain white matter bundle -- Self Supervised Denoising Diffusion Probabilistic Models for Abdominal DW-MRI -- Voxlines: Streamline Transparency through Voxelization and View-Dependent Line Orders -- Subnet Communicability: Diffusive Communication Across the Brain Through a Backbone Subnetwork -- Fast Acquisition for Diffusion Tensor Tractography -- FASSt : Filtering via Symmetric Autoencoder for Spherical Superficial White Matter Tractography -- Anisotropic Fanning Aware Low-Rank Tensor Approximation Based Tractography -- BundleCleaner: Unsupervised Denoising and Subsampling of Diffusion MRI-Derived Tractography Data -- A Deep Network for Explainable Prediction of Non-Imaging Phenotypes using Anatomical Multi-View Data -- ReTrace: Topological evaluation of white matter tractography algorithms using Reeb graphs -- Advanced diffusion MRI modeling sheds light on FLAIR white matter hyperintensities in an aging cohort.

Sommario/riassunto

This book constitutes the proceedings of the 14th International Workshop, CDMRI 2023, held in conjunction with MICCAI 2023, the 26th International Conference on Medical Image Computing and Computer-Assisted Intervention. The conference took place in Vancouver, BC, Canada, on October 8, 2023. The 17 regular papers presented in this book were carefully reviewed and selected from 19 submissions. These contributions cover various aspects, including preprocessing, signal modeling, tractography, bundle segmentation, and clinical applications. Many of these studies employ novel machine learning implementations, highlighting the evolving landscape of techniques beyond the more traditional physics-based algorithms.
