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Collana	Image Processing, Computer Vision, Pattern Recognition, and Graphics ; ; 7917
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Soggetti	Optical data processing Pattern recognition Health informatics Radiology Artificial intelligence Mathematical statistics Image Processing and Computer Vision Pattern Recognition Health Informatics Imaging / Radiology Artificial Intelligence Probability and Statistics in Computer Science
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Livello bibliografico	Monografia
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Nota di contenuto	Matched Signal Detection on Graphs: Theory and Application to Brain Network Classification -- Exploring High-Order Functional Interactions via Structurally-Weighted LASSO Models -- Feature-Based Alignment of Volumetric Multi-modal Images -- Bayesian Estimation of Regularization and Atlas Building in Diffeomorphic Image Registration -- Gradient Competition Anisotropy for Centerline Extraction and

Segmentation of Spinal Cords -- Automated Segmentation of the Cerebellar Lobules Using Boundary Specific Classification and Evolution -- Tree-Space Statistics and Approximations for Large-Scale Analysis of Anatomical Trees -- Predicting Cognitive Data from Medical Images Using Sparse Linear Regression -- A Multiple Hypothesis Based Method for Particle Tracking and Its Extension for Cell Segmentation -- A Multiple Model Probability Hypothesis Density Tracker for Time-Lapse Cell Microscopy Sequences -- Multi-layer Deformation Estimation for Fluoroscopic Imaging -- Fiber Connectivity Integrated Brain Activation Detection -- Diffeomorphic Metric Mapping of Hybrid Diffusion Imaging Based on BFOR Signal Basis -- Hyperbolic Harmonic Brain Surface Registration with Curvature-Based Landmark Matching -- Geometric Tree Kernels: Classification of COPD from Airway Tree Geometry -- Segmenting the Papillary Muscles and the Trabeculae from High Resolution Cardiac CT through Restoration of Topological Handles -- Data-Driven Interactive 3D Medical Image Segmentation Based on Structured Patch Model -- Sparse Deformable Models with Application to Cardiac Motion Analysis -- A Longitudinal Functional Analysis Framework for Analysis of White Matter Tract Statistics -- Groupwise Simultaneous Manifold Alignment for High-Resolution Dynamic MR Imaging of Respiratory Motion -- Conformal Mapping via Metric Optimization with Application for Cortical Label Fusion -- A Novel Sparse Group Gaussian Graphical Model for Functional Connectivity Estimation -- Joint Co-Segmentation and Registration of 3D Ultrasound Images -- Deformable Modeling Using a 3D Boundary Representation with Quadratic Constraints on the Branching Structure of the Blum Skeleton -- Sparse Projections of Medical Images onto Manifolds -- Efficient 3D Multi-region Prostate MRI Segmentation Using Dual Optimization -- Locality Preserving Non-negative Basis Learning with Graph Embedding -- Hierarchical Discriminative Framework for Detecting Tubular Structures in 3D Images -- Joint Fractional Segmentation and Multi-tensor Estimation in Diffusion MRI -- Retrospective Estimation of the Susceptibility Driven Field Map for Distortion Correction in Echo Planar Imaging -- Group-Wise Cortical Correspondence via Sulcal Curve-Constrained Entropy Minimization -- Diffeomorphic Spectral Matching of Cortical Surfaces -- The Non-Local Bootstrap -- Estimation of Uncertainty in Diffusion MRI -- Beyond Crossing Fibers: Tractography Exploiting Sub-voxel Fibre Dispersion and Neighbourhood Structure -- Learning from M/EEG Data with Variable Brain Activation Delays -- Unsupervised Learning of Functional Network Dynamics in Resting State fMRI -- Cohort-Level Brain Mapping: Learning Cognitive Atoms to Single Out Specialized Regions -- Torso Image Analysis Rapid Multi-organ Segmentation Using Context Integration and Discriminative Models -- Edge- and Detail-Preserving Sparse Image Representations for Deformable Registration of Chest MRI and CT Volumes -- Multimodal Surface Matching: Fast and Generalisable Cortical Registration Using Discrete Optimisation -- Globally Optimal Cortical Surface Matching with Exact Landmark Correspondence -- Joint Learning of Appearance and Transformation for Predicting Brain MR Image Registration -- Automatic Prostate MR Image Segmentation with Sparse Label Propagation and Domain-Specific Manifold Regularization -- Moving Frames for Heart Fiber Geometry -- Structural Brain Network Constrained Neuroimaging Marker Identification for Predicting Cognitive Functions -- Multi-atlas Segmentation with Robust Label Transfer and Label Fusion -- A Hierarchical Geodesic Model for Diffeomorphic Longitudinal Shape Analysis -- Active Testing Search for Point Cloud Matching -- Relating Fisher Information to Detectability of Changes in Nodule Characteristics

with CT -- Adaptive Multi-modal Particle Filtering for Probabilistic White Matter Tractography -- Can T2 -Spectroscopy Resolve Submicrometer Axon Diameters? -- Dictionary Learning on the Manifold of Square Root Densities and Application to Reconstruction of Diffusion Propagator Fields -- Diseased Region Detection of Longitudinal Knee MRI Data -- Model Selection and Estimation of Multi-compartment Models in Diffusion MRI with a Rician Noise Model -- Bayesian Segmentation of Atrium Wall Using Globally-Optimal Graph Cuts on 3D Meshes -- Using Region Trajectories to Construct an Accurate and Efficient Polyaffine Transform Model -- Extracting Evolving Pathologies via Spectral Clustering -- Construction of Multi-scale Common Brain Networks Based on DICCCOL -- Rotation Invariant Features for HARDI -- Geodesic Shape Regression in the Framework of Currents -- Multinomial Probabilistic Fiber Representation for Connectivity Driven Clustering -- Reliable Selection of the Number of Fascicles in Diffusion Images by Estimation of the Generalization Error -- IDiff: Irrotational Diffeomorphisms for Computational Anatomy -- Joint Generative Modeling of Imaging and Genetics.

Sommario/riassunto

This book constitutes the proceedings of the 23rd International Conference on Information Processing in Medical Imaging, IPMI 2013, held in Asilomar in June/July 2013. The 26 full papers and 38 poster papers presented in this volume were carefully reviewed and selected from 199 submissions. The papers are organized in topical sections on connectivity, groupwise registration, neuro segmentation, statistical analysis, dynamic imaging, cortical surface registration, diffusion MRI, functional imaging, torso image analysis, and tract analysis.
