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Titolo	Medical Image Computing and Computer Assisted Intervention – MICCAI 2019 : 22nd International Conference, Shenzhen, China, October 13–17, 2019, Proceedings, Part IV // edited by Dinggang Shen, Tianming Liu, Terry M. Peters, Lawrence H. Staib, Caroline Essert, Sean Zhou, Pew-Thian Yap, Ali Khan
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Collana	Image Processing, Computer Vision, Pattern Recognition, and Graphics ; ; 11767
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Soggetti	Optical data processing Pattern recognition Artificial intelligence Health informatics Image Processing and Computer Vision Pattern Recognition Artificial Intelligence Health Informatics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Shape -- A CNN-Based Framework for Statistical Assessment of Spinal Shape and Curvature in Whole-Body MRI Images of Large Populations -- Exploiting Reliability-guided Aggregation for the Assessment of Curvilinear Structure Tortuosity -- A Surface-theoretic Approach for Statistical Shape Modeling -- Shape Instantiation from A Single 2D Image to 3D Point Cloud with One-stage Learning -- Placental Flattening via Volumetric Parameterization with Dirichlet Energy Regularization -- Fast Polynomial Approximation to Heat Diffusion in Manifolds -- Hierarchical Multi-Geodesic Model for Longitudinal Analysis of Temporal Trajectories of Anatomical Shape and Covariates

-- Clustering of longitudinal shape data sets using mixture of separate or branching trajectories -- Group-wise Graph Matching of Cortical Gyral Hinges -- Multi-view Graph Matching of Cortical Landmarks -- Patient-specific Conditional Joint Models of Shape, Image Features and Clinical Indicators -- Surface-Based Spatial Pyramid Matching of Cortical Regions for Analysis of Cognitive Performance -- Prediction -- Diagnosis-guided multi-modal feature selection for prognosis prediction of lung squamous cell carcinoma -- Graph convolution based attention model for personalized disease prediction -- Predicting Early Stages of Neurodegenerative Diseases via Multi-task Low-rank Feature Learning -- Improved Prediction of Cognitive Outcomes via Globally Aligned Imaging Biomarker Enrichments Over Progressions -- Deep Granular Feature-Label Distribution Learning for Neuroimaging-based Infant Age Prediction -- End-to-End Dementia Status Prediction from Brain MRI using Multi-Task Weakly-Supervised Attention Network -- Unified Modeling of Imputation, Forecasting, and Prediction for AD Progression -- LSTM Network for Prediction of Hemorrhagic Transformation in Acute Stroke -- Inter-modality Dependence Induced Data Recovery for MCI Conversion Prediction -- Preprocessing, Prediction and Significance: Framework and Application to Brain Imaging -- Early Prediction of Alzheimer's Disease progression using Variational Autoencoder -- Integrating Heterogeneous Brain Networks for Predicting Brain Disease Conditions -- Detection and Localization -- Uncertainty-informed detection of epileptogenic brain malformations using Bayesian neural networks -- Automated Lesion Detection by Regressing Intensity-Based Distance with a Neural Network -- Intracranial aneurysms detection in 3D cerebrovascular mesh model with ensemble deep learning -- Automated Noninvasive Seizure Detection and Localization Using Switching Markov Models and Convolutional Neural Networks -- Multiple Landmarks Detection using Multi-Agent Reinforcement Learning -- Spatiotemporal Breast Mass Detection Network (MD-Net) in 4D DCE-MRI Images -- Automated Pulmonary Embolism Detection from CTPA Images using an End-to-End Convolutional Neural Network -- Pixel-wise anomaly ratings using Variational Auto-Encoders -- HR-CAM: Precise Localization of pathology using multi-level learning in CNNs -- Novel Iterative Attention Focusing Strategy for Joint Pathology Localization and Diagnosis of MCI Progression -- Automatic Vertebrae Recognition from Arbitrary Spine MRI images by a Hierarchical Self-calibration Detection Framework -- Machine Learning -- Image data validation for medical systems -- Captioning Ultrasound Images Automatically -- Feature Transformers: Privacy Preserving Life Learning Framework for Healthcare Applications -- As easy as 1, 2... 4? Uncertainty in counting tasks for medical imaging -- Generalizable Feature Learning in the Presence of Data Bias and Domain Class Imbalance with Application to Skin Lesion Classification -- Learning task-specific and shared representations in medical imaging -- Models Genesis: Generic Autodidactic Models for 3D Medical Image Analysis -- Efficient Ultrasound Image Analysis Models with Sonographer Gaze Assisted Distillation -- Fetal Pose Estimation in Volumetric MRI using 3D Convolution Neural Network -- Multi-Stage Prediction Networks for Data Harmonization -- Self-supervised Feature Learning for 3D Medical Images by Playing a Rubik's Cube -- Bayesian Volumetric Autoregressive generative models for better semisupervised learning with scarce Medical imaging data -- Data Augmentation for Regression Neural Networks -- A Dirty Multi-task Learning Method for Multi-modal Brain Imaging Genetics -- Robust and Discriminative Brain Genome Association Analysis -- Symmetric Dual Adversarial

Connectomic Domain Alignment for Predicting Isomorphic Brain Graph From a Baseline Graph -- Harmonization of Infant Cortical Thickness using Surface-to-Surface Cycle-Consistent Adversarial Networks -- Quantifying Confounding Bias in Neuroimaging Datasets with Causal Inference -- Computer-aided Diagnosis -- Multi Scale Curriculum CNN for Context-Aware Breast MRI Malignancy Classification -- Deep Angular Embedding and Feature Correlation Attention for Breast MRI Cancer Analysis -- Fully Deep Learning for Slit-lamp Photo based Nuclear Cataract Grading -- Overcoming Data Limitation in Medical Visual Question Answering -- Multi-Instance Multi-Scale CNN for Medical Image Classification -- Improving Uncertainty Estimation in Convolutional Neural Networks Using Inter-rater Agreement -- Improving Skin Condition Classification with a Visual Symptom Checker Trained using Reinforcement Learning -- DScGANs: Integrate Domain Knowledge in Training Dual-Path Semi-Supervised Conditional Generative Adversarial Networks and S3VM for Ultrasonography Thyroid Nodules Classification -- Similarity steered generative adversarial network and adaptive transfer learning for malignancy characterization of hepatocellular carcinoma -- Unsupervised Clustering of Quantitative Imaging Subtypes using Autoencoder and Gaussian Mixture Model -- Adaptive Sparsity Regularization Based Collaborative Clustering for Cancer Prognosis -- Coronary Artery Plaque Characterization from CCTA Scans using Deep Learning and Radiomics -- Response Estimation through Spatially Oriented Neural Network and Texture Ensemble (RESONATE) -- STructural Rectal Atlas Deformation (StRAD) features for characterizing intra- and peri-wall chemoradiation response on MRI -- Dynamic Routing Capsule Networks for Mild Cognitive Impairment Diagnosis -- Deep Multi-modal Latent Representation Learning for Automated Dementia Diagnosis -- Dynamic Spectral Convolution Networks with Assistant Task Training for Early MCI diagnosis -- Bridging Imaging, Genetics, and Diagnosis in a Coupled Low-Dimensional Framework -- Global and Local Interpretability for Cardiac MRI Classification -- Let's agree to disagree: learning highly debatable multirater labelling -- Coidentification of group-level hole structures in brain networks via Hodge Laplacian -- Confident Head Circumference Measurement from Ultrasound with Real-time Feedback for Sonographers -- Image Reconstruction and Synthesis -- Detection and Correction of Cardiac MRI Motion Artefacts during Reconstruction from k-space -- Exploiting motion for deep learning reconstruction of extremely-undersampled dynamic MRI -- VS-Net: Variable spitting network for accelerated parallel MRI reconstruction -- A Novel Loss Function Incorporating Imaging Acquisition Physics for PET Attenuation Map Generation using Deep Learning -- A Prior Learning Network for Joint Image and Sensitivity Estimation in Parallel MR Imaging -- Consensus Neural Network for Medical Image Denoising with Only Noisy Training Samples -- Consistent Brain Ageing Synthesis -- Hybrid Generative Adversarial Networks for Deep MR to CT Synthesis using Unpaired Data -- Arterial Spin Labeling Images Synthesis via Locally-constrained WGAN-GP Ensemble -- SkrGAN: Sketching-rendering Unconditional Generative Adversarial Networks for Medical Image Synthesis -- Wavelet-Based Semi-Supervised Adversarial Learning for Synthesizing Realistic 7T from 3T MRI -- DiamondGAN: Unified Multi-Modal Generative Adversarial Networks for MRI Sequences Synthesis.

Sommario/riassunto

The six-volume set LNCS 11764, 11765, 11766, 11767, 11768, and 11769 constitutes the refereed proceedings of the 22nd International Conference on Medical Image Computing and Computer-Assisted Intervention, MICCAI 2019, held in Shenzhen, China, in October 2019.

The 539 revised full papers presented were carefully reviewed and selected from 1730 submissions in a double-blind review process. The papers are organized in the following topical sections: Part I: optical imaging; endoscopy; microscopy. Part II: image segmentation; image registration; cardiovascular imaging; growth, development, atrophy and progression. Part III: neuroimage reconstruction and synthesis; neuroimage segmentation; diffusion weighted magnetic resonance imaging; functional neuroimaging (fMRI); miscellaneous neuroimaging. Part IV: shape; prediction; detection and localization; machine learning; computer-aided diagnosis; image reconstruction and synthesis. Part V: computer assisted interventions; MIC meets CAI. Part VI: computed tomography; X-ray imaging.
