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Collana	Image Processing, Computer Vision, Pattern Recognition, and Graphics ; ; 12592
Disciplina	621.367
Soggetti	Computer vision Machine learning Pattern recognition systems Social sciences - Data processing Education - Data processing Computer Vision Machine Learning Automated Pattern Recognition Computer Application in Social and Behavioral Sciences Computers and Education Aprenentatge automàtic Intel·ligència artificial Imatges per ressonància magnètica Malalties cardiovasculars Congressos Llibres electrònics
Lingua di pubblicazione	Inglese
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Note generali	Includes index.
Nota di contenuto	Regular papers -- A persistent homology-based topological loss

function for multi-class CNN segmentation of cardiac MRI -- Automatic multiplanar CT reformatting from trans-axial into left ventricle short-axis view -- Graph convolutional regression of cardiac depolarization from sparse endocardial maps -- A cartesian grid representation of left atrial appendages for deep learning based estimation of thrombogenic risk predictors -- Measure Anatomical Thickness from Cardiac MRI with Deep Neural Networks -- Modelling Fine-rained Cardiac Motion via Spatio-temporal Graph Convolutional Networks to Boost the Diagnosis of Heart Conditions- Towards mesh-free patient-specific mitral valve modeling -- PIEMAP: Personalized Inverse Eikonal Model from cardiac Electro-Anatomical Maps -- Automatic Detection of Landmarks for Fast Cardiac MR Image Registration -- Quality-aware semi-supervised learning for CMR segmentation -- Estimation of imaging biomarker's progression in post-infarct patients using cross-sectional data -- PC-U Net: Learning to Jointly Reconstruct and Segment the Cardiac Walls in 3D from CT Data -- Shape constrained CNN for cardiac MR segmentation with simultaneous prediction of shape and pose parameters -- Left atrial ejection fraction estimation using SEGANet for fully automated segmentation of CINE MRI -- Estimation of Cardiac Valve Annuli Motion with Deep Learning -- 4D Flow Magnetic Resonance Imaging for Left Atrial Haemodynamic Characterization and Model Calibration -- Segmentation-free Estimation of Aortic Diameters from MRI Using Deep Learning -- M&Ms challenge -- Histogram Matching Augmentation for Domain Adaptation with Application to Multi-Centre, Multi-Vendor and Multi-Disease Cardiac Image Segmentation -- Disentangled Representations for Domain-generalized Cardiac Segmentation -- A 2-step Deep Learning method with Domain Adaptation for Multi-Centre, Multi-Vendor and Multi-Disease Cardiac Magnetic Resonance Segmentation -- Random Style Transfer based Domain Generalization Networks Integrating Shape and Spatial Information -- Semi-supervised Cardiac Image Segmentation via Label Propagation and Style Transfer -- Domain-Adversarial Learning for Multi-Centre, Multi-Vendor, and Multi-Disease Cardiac MR Image Segmentation -- Studying Robustness of Segmantic Segmentation under Domain Shift in cardiac MRI -- A deep convolutional neural network approach for the segmentation of cardiac structures from MRI sequences -- Multi-center, Multi-vendor, and Multi-disease Cardiac Image Segmentation Using Scale-Independent Multi-Gate UNET -- Adaptive Preprocessing for Generalization in Cardiac MR Image Segmentation -- Deidentifying MRI data domain by iterative backpropagation -- A generalizable deep-learning approach for cardiac magnetic resonance image segmentation using image augmentation and attention U-Net -- Generalisable Cardiac Structure Segmentation via Attentional and Stacked Image Adaptation -- Style-invariant Cardiac Image Segmentation with Test-time Augmentation -- EMIDEC challenge -- Comparison of a Hybrid Mixture Model and a CNN for the Segmentation of Myocardial Pathologies in Delayed Enhancement MRI -- Cascaded Convolutional Neural Network for Automatic Myocardial Infarction Segmentation from Delayed-Enhancement Cardiac MRI -- Automatic Myocardial Disease Prediction From Delayed-Enhancement Cardiac MRI and Clinical Information -- SM2N2: A Stacked Architecture for Multimodal Data and its Application to Myocardial Infarction Detection -- A Hybrid Network for Automatic Myocardial Infarction Segmentation in Delayed Enhancement-MRI -- Efficient 3D deep learning for myocardial diseases segmentation -- Deep-learning-based myocardial pathology detection -- Automatic Myocardial Infarction Evaluation from Delayed-Enhancement Cardiac MRI using Deep Convolutional Networks -- Uncertainty-based

Segmentation of Myocardial Infarction Areas on Cardiac MR images -- Anatomy Prior Based U-net for Pathology Segmentation with Attention -- Automatic Scar Segmentation from DE-MRI Using 2D Dilated UNet with Rotation-based Augmentation -- Classification of pathological cases of myocardial infarction using Convolutional Neural Network and Random Forest. .

Sommario/riassunto

This book constitutes the proceedings of the 11th International Workshop on Statistical Atlases and Computational Models of the Heart, STACOM 2020, as well as two challenges: M&Ms - The Multi-Centre, Multi-Vendor, Multi-Disease Segmentation Challenge, and EMIDEC - Automatic Evaluation of Myocardial Infarction from Delayed-Enhancement Cardiac MRI Challenge. The 43 full papers included in this volume were carefully reviewed and selected from 70 submissions. They deal with cardiac imaging and image processing, machine learning applied to cardiac imaging and image analysis, atlas construction, artificial intelligence, statistical modelling of cardiac function across different patient populations, cardiac computational physiology, model customization, atlas based functional analysis, ontological schemata for data and results, integrated functional and structural analyses, as well as the pre-clinical and clinical applicability of these methods. .