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Autore	Cui Zhiming
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Altri autori (Persone)	RekiIslem SukHeung-II OuyangXi SunKaicong WangSheng
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Nota di contenuto	-- LGE-Guided Cross-Modality Contrastive Learning for Gadolinium-Free Cardiomyopathy Screening in Cine CMR. -- Facial Model Assisted Shape Prediction for Orthognathic Surgery. -- Joint Motion Correction

of Multi-Atlas Functional Connectivity during Infancy. -- 3D-ReVert: 3D Reconstruction of Vertebrae from a Single Radiograph for Minimally Invasive Spine Surgery. -- ViViT: Variable-Input Vision Transformer Framework for 3D MR Image Segmentation. -- gResDM: A Graph-driven Residual Diffusion Model for Accelerating DWI Data Acquisition. -- Semi-Supervised 3D Medical Segmentation from 2D Natural Images Pretrained Model. -- Regional Hausdorff Distance Losses for Medical Image Segmentation. -- Identification of functional brain dynamics based on structural connectivity constrained functional time series. -- MR-CLIP: Efficient Metadata-Guided Learning of MRI Contrast Representations. -- Lightweight Hypercomplex MRI Reconstruction: A Generalized Kronecker-Parameterized Approach. -- Leveraging self-supervised pretraining using transformers for enhanced lung nodule detection in CT scans. -- From Action to Anatomy - Countering Data Scarcity with Video-Based Training for Ill-Posed MRI Problems. -- Auditing Significance, Metric Choice, and Demographic Fairness in Medical AI Challenges. -- Synthesis of Abdominal Contrast-Enhanced CT using Diffusion-based Spatial Transform Control. -- AMD-Mamba: A Phenotype-Aware Multi-Modal Framework for Robust AMD Prognosis. -- DEnPL: Improved Classification in Imbalanced Medical Datasets via Data-Engineered Prototypical Metric Loss. -- A Detail-preserving Latent Diffusion Model for Arbitrarily Accelerated MR Imaging. -- TransGATNet: Hybrid Temporal-Frequency Features with Graph-Attention Transformers for Sleep Staging in OSA Patients. -- U-DFA: A Unified DINOv2-Unet with Dual Fusion Attention for Multi-Dataset Medical Segmentation. -- UniDis: Universal Distillation for Efficient and Personalized Pathology Diagnosis. -- End-to-end Cortical Surface Reconstruction from Clinical Magnetic Resonance Images. -- Brain Network Mamba: A Bi-directional State-Space Model for Brain Network Analysis on rs-fMRI. -- Emerging Semantic Segmentation from Positive and Negative Coarse Label Learning. -- ClinicalFMamba: Advancing Clinical Assessment using Mamba-based Multimodal Neuroimaging Fusion. -- TissueAgeNet: Quantitative Textual Guidance for Tissue Level Brain Age Estimation. -- Surface-Guided Construction of 4D Volumetric Atlases of Fetal Brains. -- Radiogenomic Bipartite Graph Representation Learning for Alzheimer's Disease Detection. -- Feature Imputation for Missing Modalities in Multimodal Ultrasound. -- CCMorph: Conditional Contrastive Learning for Unsupervised Medical Image Registration. -- CAC-MAE: A Calcification-aware Masked Autoencoder for Cardiovascular Disease Risk Assessment on Low-Dose CT. -- HiT-ULM: Hierarchical Temporal Dynamics Learning for Efficient Clinical Ultrasound Localization Microscopy. -- Policy to Assist Iteratively Local Segmentation: Optimising Modality and Location Selection for Prostate Cancer Localisation. -- Domain Adaptation for Ulcerative Colitis Severity Estimation Using Patient-Level Diagnoses. -- AREPAS: Anomaly Detection in Fine-Grained Anatomy with Reconstruction based Semantic Patch Scoring. -- Beyond Pixels: Medical Image Quality Assessment with Implicit Neural Representations. -- Medical Referring Image Segmentation: Addressing Multi-Lesion Reference and Annotation Uncertainty via Vision-Language Fusion. -- Towards Generalizable Clinical Knowledge Discovery for Radiology Report Generation. -- Weighted Mean Frequencies: a handcraft Fourier feature for 4D Flow MRI segmentation. -- ConnecToMind: Connectome-Aware fMRI Decoding for Visual Image Reconstruction. -- Segmentation of glioblastoma infiltration using hybrid labels from MRI and [18F]FET PET. -- Patch-level attribution of multimodal fracture risk prediction. -- Scheduled Cross-Domain Multi-Center DINO for Robust High-Content Screening Representation

Learning. -- Temporal Periodic Image Registration with Implicit Neural Representations. -- Diagnosis of Blood Diseases and Disorders with Topological Deep Learning. -- Temporal Super-Resolution of Medical Images with Implicit Neural Representations. -- GyratNet Sub-network Partitioning via Differentiable Spectral Modularity Optimization. -- GRASPiNG Anatomy to Improve Pathology Segmentation. -- Preserving Diagnostic Details in Low-Dose CT with Frequency-Domain Guided Deep Learning. -- Evaluating structural uncertainty in accelerated MRI: are voxelwise measures useful surrogates?. -- SwinDDF: Dense Dynamic Fusion Network for 3D Segmentation of Complex-Shaped Nuclei. -- Improving Visual Search in Medical Videos with Self-Supervised Learning and Temporal Feature Integration. -- Ontology-Based Concept Distillation for Radiology Report Retrieval and Labeling. -- Automated Dental Caries Segmentation in Panoramic Radiographs Using Dual-Stage Deep Learning. -- Anatomy-Guided Semi-Supervised Registration with Combined Rigid and Label Supervision for Improved Rib Deformation Consistency. -- MultiMAE for Brain MRIs: Robustness to Missing Inputs Using Multi-Modal Masked Autoencoder. -- Attention Pooling Enhances NCA-based Classification of Microscopy Images. -- Predicting Cognitive Outcomes by Mapping White Matter Tracts to Surface. -- Bridging Brain Connectomes and Clinical Reports for Early Alzheimer's Disease Diagnosis. -- Image-Guided Liver Tumor Synthesis. -- Relation-Preserving Harmonization of Functional Connectivity Representation: Ensuring Local Functional, Longitudinal, and Population-Level Consistency. -- nnU-BNST: Deep Learning-Based Automated Segmentation of the Bed Nucleus of the Stria Terminalis. -- AGFuse-Net: Enhancing Rapid SPECT/CT Imaging via Anatomy-Guided Attention Gates and Multimodality Fusion Network. -- GMPT: General Multimodal Segmentation Model Guided by Multi-Expert Pathway. -- Diff4MMLiTS: Advanced Multimodal Liver Tumor Segmentation via Diffusion-Based Image Synthesis and Alignment.

Sommario/riassunto

This book constitutes the refereed proceedings of the 16th International Workshop on Machine Learning in Medical Imaging, MLMI 2025, held in Conjunction with MICCAI 2025, Daejeon, South Korea, on September 23, 2025. The 65 full papers included in this book were carefully reviewed and selected from 101 submissions. They focus on advanced scientific research covering topics such as deep learning, foundation models, generative learning, and statistical methods with their applications to computer-aided diagnosis, multi-modality fusion, image reconstruction, digital pathology, and large-scale data analytics.
