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Nota di contenuto	-- Anisotropic Fourier Features for Positional Encoding in Medical Imaging. -- PSGM-TR: A Transformer-Based Approach for Pulmonary Segment Segmentation Using Gaussian Mixture Models. -- A Unified Pipeline for Explainable Gait Analysis. -- ShapeKit. -- Posterior Shape Models Revisited: Improving 3D Reconstructions from Partial Data Using Target-Specific Models. -- Anatomically-Focused Patches for Lightweight and Explainable Knee OA Grading. -- Benchmarking Evaluation Metrics for Tubular Structure Segmentation in Biomedical Images. -- Large Intestine 3D Shape Refinement Using Conditional Latent Point Diffusion Models. -- A Statistical 3D Stomach Shape Model for Anatomical Analysis. -- AnatomyGen: Generating Anatomically Plausible Human Phantoms at High Resolution. -- Template-Based Cortical Surface Reconstruction with Minimal Energy

Deformation. -- Spherical Brownian Bridge Diffusion Models for Conditional Cortical Thickness Forecasting. -- OsteoDeform: Osteophyte-Aware Shape Deformations of Distal Femur Models for Surgical Planning in Total Knee Arthroplasty. -- Spline-based shape compression for interventional device tracking. -- End-to-End Learning of Multi-Organ Implicit Surfaces from 3D Medical Imaging Data. -- A Simple Modality-Agnostic Representation for Scoliosis Phenotyping. -- US-X Complete: A Multi-Modal Approach to Anatomical 3D Shape Recovery. -- A Scalable Toolkit for Modeling 3D Surface-based Brain Geometry. -- Parametric shape models for vessels learned from segmentations via differentiable voxelization. -- Deep Learning Enables Large-Scale Shape and Appearance Modeling in Total-Body DXA Imaging. -- GReAT: leveraging geometric artery data to improve wall shear stress assessment. -- Shape vs flow: a 2D statistical shape analysis of the projection of common iliac veins in patients with deep vein thrombosis. -- Implicit Shape-Prior for Few-Shot Assisted 3D Segmentation. -- Point Set Registration Metrics Reloaded for Computer-Assisted Surgery. -- Benchmark-Ready 3D Anatomical Shape Classification. -- SimCortex: Collision-free Simultaneous Cortical Surfaces Reconstruction.

Sommario/riassunto

This book constitutes the proceedings of the International Workshop on Shape in Medical Imaging, ShapeMI 2025, which took place in Daejeon, South Korea, on September 23, 2025, held in conjunction with MICCAI 2025. The 26 full papers included in this book were carefully reviewed and selected from 28 submissions. They focus on shape and spectral analysis, geometric learning and modeling algorithms, and application-driven research.