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Soggetti	Computer vision Computer networks Social sciences - Data processing Machine learning Computer science - Mathematics Pattern recognition systems Computer Vision Computer Communication Networks Computer Application in Social and Behavioral Sciences Machine Learning Mathematics of Computing Automated Pattern Recognition
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Nota di contenuto	Inverse Problems in Imaging -- Explicit Diffusion of Gaussian Mixture Model Based Image Priors -- Efficient Neural Generation of 4K Masks for Homogeneous Diffusion Inpainting -- Theoretical Foundations for Pseudo-Inversion of Nonlinear Operators -- A Frame Decomposition of the Funk-Radon Transform -- Prony-Based Super-Resolution Phase Retrieval of Sparse, Multidimensional Signals -- Limited Electrodes Models in Electrical Impedance Tomography Reconstruction -- On

Trainable Multiplicative Noise Removal Models -- Surface Reconstruction from 2D Noisy Point Cloud Data using Directional G-norm -- Regularized Material Decomposition for K-Edge Separation in Hyperspectral Computed Tomography -- Quaternary Image Decomposition with Cross-Correlation-Based Multi-Parameter Selection -- Machine and Deep Learning in Imaging -- EmNeF: Neural Fields for Embedded Variational Problems in Imaging -- GenHarris-ResNet: A Rotation Invariant Neural Network Based on Elementary Symmetric Polynomials -- Compressive Learning of Deep Regularization for Denoising -- Graph Laplacian and Neural Networks for Inverse Problems in Imaging: graphLaNet -- Learning Posterior Distributions in Underdetermined Inverse Problems -- Proximal Residual Flows for Bayesian Inverse Problems -- A Model Is Worth Tens of Thousands of Examples -- Resolution-Invariant Image Classification Based on Fourier Neural Operators -- Graph Laplacian for Semi-Supervised Learning -- A Geometrically Aware Auto-Encoder for Multi-Texture Synthesis -- Fast Marching Energy CNN -- Deep Accurate Solver for the Geodesic Problem -- Deep Image Prior Regularized by Coupled Total Variation for Image Colorization -- Hybrid Training of Denoising Networks to Improve the Texture Acutance of Digital Cameras -- Latent-Space Disentanglement with Untrained Generator Networks for the Isolation of Different Motion Types in Video Data -- Natural Numerical Networks on Directed Graphs in Satellite Image Classification -- Piece-Wise Constant Image Segmentation with a Deep Image Prior Approach -- On the Inclusion of Topological Requirements in CNNs for Semantic Segmentation Applied to Radiotherapy -- Optimization for Imaging: Theory and Methods -- A Relaxed Proximal Gradient Descent Algorithm for Convergent Plug-and-Play with Proximal Denoiser -- Off-the-Grid Charge Algorithm for Curve Reconstruction in Inverse Problems -- Convergence Guarantees of Overparametrized Wide Deep Inverse Prior -- On the Remarkable Efficiency of SMART -- Wasserstein Gradient Flows of the Discrepancy with Distance Kernel on the Line -- A Quasi-Newton Primal-Dual Algorithm with Line Search -- Stochastic Gradient Descent for Linear Inverse Problems in Variable Exponent Lebesgue Spaces -- An Efficient Line Search for Sparse Reconstruction -- Learned Discretization Schemes for the Second-Order Total Generalized Variation -- Fluctuation-Based Deconvolution in Fluorescence Microscopy Using Plug-and-Play Denoisers -- Segmenting MR Images Through Texture Extraction and Multiplicative Components Optimization -- Scale Space, PDEs, Flow, Motion and Registration -- Geodesic Tracking of Retinal Vascular Trees with Optical and TV-Flow Enhancement in $SE(2)$ -- Geometric Adaptations of PDE-G-CNNs -- The Variational Approach to the Flow of Sobolev-Diffeomorphisms Model -- Image Comparison and Scaling via Nonlinear Elasticity -- Learning Differential Invariants of Planar Curves -- Diffusion-Shock inpainting -- Generalised Scale-Space Properties for Probabilistic Diffusion Models -- Gromov-Wasserstein Transfer Operators -- Optimal Transport Between GMM for Multiscale Texture Synthesis -- Asymptotic Result for a Decoupled Nonlinear Elasticity-Based Multiscale Registration Model -- Image Blending with Osmosis -- -Pixels for Hierarchical Analysis of Digital Objects -- Hypergraph p-Laplacians, Scale Spaces, and Information Flow in Networks -- On Photometric Stereo in the Presence of a Refractive Interface -- Multi-View Normal Estimation -- Application to Slanted Plane-Sweeping -- Partial Shape Similarity by Multi-Metric Hamiltonian Spectra Matching -- Modeling Large-Scale Joint Distributions and Inference by Randomized Assignment -- Quantum State Assignment Flows.

This book constitutes the proceedings of the 9th International Conference on Scale Space and Variational Methods in Computer Vision, SSVM 2023, which took place in Santa Margherita di Pula, Italy, in May 2023. The 57 papers presented in this volume were carefully reviewed and selected from 72 submissions. They were organized in topical sections as follows: Inverse Problems in Imaging; Machine and Deep Learning in Imaging; Optimization for Imaging: Theory and Methods; Scale Space, PDEs, Flow, Motion and Registration.
