1. Record Nr. UNINA9910483096403321

Titolo	Scale Space and Variational Methods in Computer Vision : 8th International Conference, SSVM 2021, Virtual Event, May 16–20, 2021, Proceedings / / edited by Abderrahim Elmoataz, Jalal Fadili, Yvain Quéau, Julien Rabin, Loïc Simon
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2021
ISBN	3-030-75549-5
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (584 pages)
Collana	Image Processing, Computer Vision, Pattern Recognition, and Graphics, , 3004-9954 ; ; 12679
Disciplina	006.37
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
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Scale Space and Partial Differential Equations Methods -- Scale-covariant and Scale-invariant Gaussian Derivative Networks -- Quantisation Scale-Spaces -- Equivariant Deep Learning via Morphological and Linear Scale Space PDEs on the Space of Positions and Orientations -- Nonlinear Spectral Processing of Shapes via Zero-homogeneous Flows -- Total-Variation Mode Decomposition -- Fast Morphological Dilation and Erosion for Grey Scale Images Using the Fourier Transform -- Diffusion, Pre-Smoothing and Gradient Descent

-- Local Culprits of Shape Complexity -- Extension of Mathematical Morphology in Riemannian Spaces -- Flow, Motion and Registration -- Multiscale Registration -- Challenges for Optical Flow Estimates in Elastography -- An Anisotropic Selection Scheme for Variational Optical Flow Methods with Order-Adaptive Regularisation -- Low-rank Registration of Images Captured Under Unknown, Varying Lighting -- Towards Efficient Time Stepping for Numerical Shape Correspondence -- First Order Locally Orderless Registration -- Optimization Theory and Methods in Imaging -- First Order Geometric Multilevel Optimization For Discrete Tomography -- Bregman Proximal Gradient Algorithms for Deep Matrix Factorization -- Hessian Initialization Strategies for L-BFGS Solving Non-linear Inverse Problems -- Inverse Scale Space Iterations for Non-Convex Variational Problems Using Functional Lifting -- A Scaled and Adaptive FISTA Algorithm for Signal-dependent Sparse Image Super-resolution Problems -- Convergence Properties of a Randomized Primal-Dual Algorithm with Applications to Parallel MRI -- Machine Learning in Imaging -- Wasserstein Generative Models for Patch-based Texture Synthesis -- Sketched Learning for Image Denoising -- Translating Numerical Concepts for PDEs into Neural Architectures -- CLIP: Cheap Lipschitz Training of Neural Networks -- Variational Models for Signal Processing with Graph Neural Networks -- Synthetic Imagesas a Regularity Prior for Image Restoration Neural Networks -- Geometric Deformation on Objects: Unsupervised Image Manipulation via Conjugation -- Learning Local Regularization for Variational Image Restoration -- Segmentation and Labelling -- On the Correspondence between Replicator Dynamics and Assignment Flows -- Learning Linear Assignment Flows for Image Labeling via Exponential Integration -- On the Geometric Mechanics of Assignment Flows for Metric Data Labeling -- A Deep Image Prior Learning Algorithm for Joint Selective Segmentation and Registration -- Restoration, Reconstruction and Interpolation -- Inpainting-based Video Compression in FullHD -- Sparsity-aided Variational Mesh Restoration -- Lossless PDE-based Compression of 3D Medical Images -- Splines for Image Metamorphosis -- Residual Whiteness Principle for Automatic Parameter Selection in `2-`2 Image Super-resolution Problems -- Inverse Problems in Imaging -- Total Deep Variation for Noisy Exit Wave Reconstruction in Transmission Electron Microscopy -- GMM-based Simultaneous Reconstruction and Segmentation in X-ray CT application -- Phase Retrieval via Polarization in Dynamical Sampling -- Invertible Neural Networks versus MCMC for Posterior Reconstruction in Grazing Incidence X-Ray Fluorescence -- Adversarially Learned Iterative Reconstruction for Imaging Inverse Problems -- Towards Off-the-grid Algorithms for Total Variation Regularized Inverse Problems -- Multi-frame Super-resolution from Noisy Data.

Sommario/riassunto

This book constitutes the proceedings of the 8th International Conference on Scale Space and Variational Methods in Computer Vision, SSVM 2021, which took place during May 16-20, 2021. The conference was planned to take place in Cabourg, France, but changed to an online format due to the COVID-19 pandemic. The 45 papers included in this volume were carefully reviewed and selected from a total of 64 submissions. They were organized in topical sections named as follows: scale space and partial differential equations methods; flow, motion and registration; optimization theory and methods in imaging; machine learning in imaging; segmentation and labelling; restoration, reconstruction and interpolation; and inverse problems in imaging. .