1. Record Nr. UNINA9910483697703321

Titolo	Scale Space and Variational Methods in Computer Vision : First International Conference, SSVM 2007, Ischia, Italy, May 30 - June 2, 2007, Proceedings / / edited by Fiorella Sgallari, Almerico Murli, Nikos Paragios
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2007
ISBN	1-280-95778-6 9786610957781 3-540-72823-6
Edizione	[1st ed. 2007.]
Descrizione fisica	1 online resource (945 p.)
Collana	Image Processing, Computer Vision, Pattern Recognition, and Graphics, , 3004-9954 ; ; 4485
Disciplina	006.37
Soggetti	Computer vision Computer graphics Pattern recognition systems Artificial intelligence Numerical analysis Algorithms Computer Vision Computer Graphics Automated Pattern Recognition Artificial Intelligence Numerical Analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Oral Presentations -- Full Affine Wavelets Are Scale-Space with a Twist -- Iterated Nonlocal Means for Texture Restoration -- The Jet Metric -- Scale Selection for Compact Scale-Space Representation of Vector-Valued Images -- An High Order Finite Co-volume Scheme for Denoising Using Radial Basis Functions -- Linear Image Reconstruction by Sobolev Norms on the Bounded Domain -- A Nonconvex Model to

Remove Multiplicative Noise -- Best Basis Compressed Sensing -- Efficient Beltrami Filtering of Color Images Via Vector Extrapolation -- Vector-Valued Image Interpolation by an Anisotropic Diffusion-Projection PDE -- Faithful Recovery of Vector Valued Functions from Incomplete Data -- Discrete Regularization on Weighted Graphs for Image and Mesh Filtering -- Counter-Examples for Bayesian MAP Restoration -- New Possibilities with Sobolev Active Contours -- A Geometric-Functional-Based Image Segmentation and Inpainting -- Level Set Methods for Watershed Image Segmentation -- Segmentation Under Occlusions Using Selective Shape Prior -- On the Statistical Interpretation of the Piecewise Smooth Mumford-Shah Functional -- Fuzzy Region Competition: A Convex Two-Phase Segmentation Framework -- A Variational Approach for Multi-valued Velocity Field Estimation in Transparent Sequences -- Dense Optical Flow Estimation from the Monogenic Curvature Tensor -- A Consistent Spatio-temporal Motion Estimator for Atmospheric Layers -- Paretian Similarity for Partial Comparison of Non-rigid Objects -- Some Remarks on Perspective Shape-from-Shading Models -- Poster Presentations -- Scale-Space Clustering with Recursive Validation -- Scale Spaces on Lie Groups -- Convex Inverse Scale Spaces -- Spatio-temporal Scale-Spaces -- A Scale-Space Reeb-Graph of Topological Invariants of Images and Its Applications to Content Identification -- Salient Regions from Scale-Space Trees -- Generic Maximum Likely Scale Selection -- Combining Different Types of Scale Space Interest Points Using Canonical Sets -- Feature Vector Similarity Based on Local Structure -- Maximum Likelihood Metameres for Local 2 nd Order Image Structure of Natural Images -- Fast and Accurate Gaussian Derivatives Based on B-Splines -- Uniform and Textured Regions Separation in Natural Images Towards MPM Adaptive Denoising -- The Variational Origin of Motion by Gaussian Curvature -- A Variational Method with a Noise Detector for Impulse Noise Removal -- Detection and Completion of Filaments: A Vector Field and PDE Approach -- Nonlinear Diffusion on the 2D Euclidean Motion Group -- A TV-Stokes Denoising Algorithm -- Anisotropic ?-Kernels and Associated Flows -- Bounds on the Minimizers of (nonconvex) Regularized Least-Squares -- Numerical Invariantization for Morphological PDE Schemes -- Bayesian Non-local Means Filter, Image Redundancy and Adaptive Dictionaries for Noise Removal -- Restoration of Images with Piecewise Space-Variant Blur -- Mumford-Shah Regularizer with Spatial Coherence -- A Generic Approach to the Filtering of Matrix Fields with Singular PDEs -- Combining Curvature Motion and Edge-Preserving Denoising -- Coordinate-Free Diffusion over Compact Lie-Groups -- Riemannian Curvature-Driven Flows for Tensor-Valued Data -- A Variational Framework for Spatio-temporal Smoothing of Fluid Motions -- Super-Resolution Using Sub-band Constrained Total Variation -- Non-negative Sparse Modeling of Textures -- Texture Synthesis and Modification with a Patch-Valued Wavelet Transform -- A Variational Framework for the Simultaneous Segmentation and Object Behavior Classification of Image Sequences -- Blur Invariant Image Priors -- A Variational Framework forAdaptive Satellite Images Segmentation -- Piecewise Constant Level Set Method for 3D Image Segmentation -- Histogram Based Segmentation Using Wasserstein Distances -- Efficient Segmentation of Piecewise Smooth Images -- Space-Time Segmentation Based on a Joint Entropy with Estimation of Nonparametric Distributions -- Region Based Image Segmentation Using a Modified Mumford-Shah Algorithm -- Total Variation Minimization and Graph Cuts for Moving Objects Segmentation -- Curve Evolution in Subspaces -- Identification of Grain Boundary

Contours at Atomic Scale -- Solving the Chan-Vese Model by a Multiphase Level Set Algorithm Based on the Topological Derivative -- A Geometric Variational Framework for Simultaneous Registration and Parcellation of Homologous Surfaces -- Motion Compensated Video Super Resolution -- Kullback Leibler Divergence Based Curve Matching Method -- Beauty with Variational Methods: An Optic Flow Approach to Hairstyle Simulation -- A Variational Approach for 3D Motion Estimation of Incompressible PIV Flows -- Detecting Regions of Dynamic Texture -- A Method for the Transport and Registration of Images on Implicit Surfaces -- Direct Shape-from-Shading with Adaptive Higher Order Regularisation -- 3D Object Recognition by Eigen-Scale-Space of Contours -- Towards Segmentation Based on a Shape Prior Manifold -- Geometric Sampling of Manifolds for Image Representation and Processing -- Modeling Foveal Vision.

Sommario/riassunto

This book constitutes the refereed proceedings of the First International Conference on Scale Space Methods and Variational Methods in Computer Vision, SSVM 2007, emanated from the joint edition of the 4th International Workshop on Variational, Geometric and Level Set Methods in Computer Vision, VLSM 2007 and the 6th International Conference on Scale Space and PDE Methods in Computer Vision, Scale-Space 2007, held in Ischia Italy in May/June 2007. The 24 revised full papers and 55 revised poster papers presented were carefully reviewed and selected from 133 submissions. The papers are organized in topical sections on scale space and features extraction, image enhancement and reconstruction, image segmentation and visual grouping, motion analysis, optical flow, registration and tracking, 3D from images, scale space and feature extraction, image enhancement, reconstruction and texture synthesis, image segmentation and visual grouping, motion analysis, optical flow, registration and tracking, and biological relevance.