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Classificazione	004
Disciplina	006.4/2
Soggetti	Optical data processing Pattern recognition Artificial intelligence Computer graphics Algorithms Application software Image Processing and Computer Vision Pattern Recognition Artificial Intelligence Computer Graphics Algorithm Analysis and Problem Complexity Information Systems Applications (incl. Internet)
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Geometry and Calibration -- 3D Reconstruction Using an n-Layer Heightmap -- Real-Time Dense Geometry from a Handheld Camera -- From Single Cameras to the Camera Network: An Auto-Calibration Framework for Surveillance -- Active Self-calibration of Multi-camera Systems -- Poster Session I -- Optimization on Shape Curves with

Application to Specular Stereo -- Unsupervised Facade Segmentation Using Repetitive Patterns -- Image Segmentation with a Statistical Appearance Model and a Generic Mumford-Shah Inspired Outside Model -- Estimating Force Fields of Living Cells – Comparison of Several Regularization Schemes Combined with Automatic Parameter Choice -- Classification of Microorganisms via Raman Spectroscopy Using Gaussian Processes -- Robust Identification of Locally Planar Objects Represented by 2D Point Clouds under Affine Distortions -- Model-Based Recognition of Domino Tiles Using TGraphs -- Slicing the View: Occlusion-Aware View-Based Robot Navigation -- A Contour Matching Algorithm to Reconstruct Ruptured Documents -- Local Structure Analysis by Isotropic Hilbert Transforms -- Complex Motion Models for Simple Optical Flow Estimation -- Tracking People in Broadcast Sports -- A Template-Based Approach for Real-Time Speed-Limit-Sign Recognition on an Embedded System Using GPU Computing -- Inpainting in Multi-image Stereo -- Analysis of Length and Orientation of Microtubules in Wide-Field Fluorescence Microscopy -- Learning Non-stationary System Dynamics Online Using Gaussian Processes -- Computational TMA Analysis and Cell Nucleus Classification of Renal Cell Carcinoma -- Recognition -- Efficient Object Detection Using Orthogonal NMF Descriptor Hierarchies -- VF-SIFT: Very Fast SIFT Feature Matching -- One-Shot Learning of Object Categories Using Dependent Gaussian Processes -- Learning and Optimization -- Uncertainty Driven Multi-scale Optimization -- The Group-Lasso: ?1,??? Regularization versus ?1,2 Regularization -- Random Fourier Approximations for Skewed Multiplicative Histogram Kernels -- Gaussian Mixture Modeling with Gaussian Process Latent Variable Models -- Applications -- Classification of Swimming Microorganisms Motion Patterns in 4D Digital In-Line Holography Data -- Catheter Tracking: Filter-Based vs. Learning-Based -- Exploiting Redundancy for Aerial Image Fusion Using Convex Optimization -- Poster Session II -- A Convex Approach for Variational Super-Resolution -- Incremental Learning in the Energy Minimisation Framework for Interactive Segmentation -- A Model-Based Approach to the Segmentation of Nasal Cavity and Paranasal Sinus Boundaries -- Wavelet-Based Inpainting for Object Removal from Image Series -- An Empirical Comparison of Inference Algorithms for Graphical Models with Higher Order Factors Using OpenGM -- N-View Human Silhouette Segmentation in Cluttered, Partially Changing Environments , -- Nugget-Cut: A Segmentation Scheme for Spherically- and Elliptically-Shaped 3D Objects -- Benchmarking Stereo Data (Not the Matching Algorithms) -- Robust Open-Set Face Recognition for Small-Scale Convenience Applications -- Belief Propagation for Improved Color Assessment in Structured Light -- 3D Object Detection Using a Fast Voxel-Wise Local Spherical Fourier Tensor Transformation -- Matte Super-Resolution for Compositing -- An Improved Histogram of Edge Local Orientations for Sketch-Based Image Retrieval -- A Novel Curvature Estimator for Digital Curves and Images -- Local Regression Based Statistical Model Fitting -- Semi-supervised Learning of Edge Filters for Volumetric Image Segmentation -- Motion -- Geometrically Constrained Level Set Tracking for Automotive Applications -- Interactive Motion Segmentation -- On-Line Multi-view Forests for Tracking -- Low-Level Vision and Features -- Probabilistic Multi-class Scene Flow Segmentation for Traffic Scenes -- A Stochastic Evaluation of the Contour Strength -- Incremental Computation of Feature Hierarchies -- From Box Filtering to Fast Explicit Diffusion -- Surfaces and Materials -- High-Resolution Object Deformation Reconstruction with Active Range Camera -- Selection of an Optimal Polyhedral Surface

Model Using the Minimum Description Length Principle -- Learning of Optimal Illumination for Material Classification.

Sommario/riassunto

On behalf of the organizing committee, we would like to welcome you to Da- nd stadt and DAGM 2010,the 32 Annual Symposium of the German Association for Pattern Recognition. The technical program covered all aspects of pattern recognition and, to name only a few areas, ranged from 3D reconstruction, to object recognition and medical applications. The result is re?ected in these proceedings, which contain the papers presented at DAGM 2010. Our call for papers resulted in 134 submissions from institutions in 21 countries. Each paper underwent a rigorous reviewing process and was assigned to at least three program committee m- bers for review. The reviewing phase was followed by a discussion phase among the respective program committee members in order to suggest papers for - ceptance. The ?nal decision was taken during a program committee meeting held in Darmstadt based on all reviews, the discussion results and, if necessary, additional reviewing. Based on this rigorous process we selected a total of 57 papers, corresponding to an acceptance rate of below 45%. Out of all accepted papers, 24 were chosen for oral and 33 for poster presentation. All accepted - pers have been published in these proceedings and given the same number of pages. We would like to thank all members of the program committee as well as the external reviewers for their valuable and highly appreciated contribution to the community.