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Descrizione fisica	1 online resource (VIII, 200 p.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 3247
Disciplina	006.3/7
Soggetti	Optical data processing Computer graphics Pattern recognition Mathematical statistics Artificial intelligence Algorithms Image Processing and Computer Vision Computer Graphics Pattern Recognition Probability and Statistics in Computer Science Artificial Intelligence Algorithm Analysis and Problem Complexity
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	3D Geometry -- Towards Complete Free-Form Reconstruction of Complex 3D Scenes from an Unordered Set of Uncalibrated Images -- Geometric Structure of Degeneracy for Multi-body Motion Segmentation -- Virtual Visual Hulls: Example-Based 3D Shape Inference from Silhouettes -- Unbiased Errors-In-Variables Estimation Using Generalized Eigensystem Analysis -- Tracking -- Probabilistic Tracking of the Soccer Ball -- Multi-Model Component-Based Tracking Using Robust Information Fusion -- A Probabilistic Approach to Large

Displacement Optical Flow and Occlusion Detection -- Mean-Shift Blob Tracking with Kernel-Color Distribution Estimate and Adaptive Model Update Criterion -- Combining Simple Models to Approximate Complex Dynamics -- Background Modeling -- Online Adaptive Gaussian Mixture Learning for Video Applications -- Novelty Detection in Image Sequences with Dynamic Background -- A Framework for Foreground Detection in Complex Environments -- A Background Maintenance Model in the Spatial-Range Domain -- Image/Video Analysis -- A New Robust Technique for Stabilizing Brightness Fluctuations in Image Sequences -- Factorization of Natural 4×4 Patch Distributions -- Parametric and Non-parametric Methods for Linear Extraction -- Crowd Segmentation Through Emergent Labeling.

Sommario/riassunto

The 2nd International Workshop on Statistical Methods in Video Processing, SMVP 2004, was held in Prague, Czech Republic, as an associated workshop of ECCV 2004, the 8th European Conference on Computer Vision. A total of 30 papers were submitted to the workshop. Of these, 17 papers were accepted for presentation and included in these proceedings, following a double-blind review process. The workshop had 42 registered participants. The focus of the meeting was on recent progress in the application of advanced statistical methods to solve computer vision tasks. The one-day scientific program covered areas of high interest in vision research, such as dense reconstruction of 3D scenes, multibody motion segmentation, 3D shape inference, errors-in-variables estimation, probabilistic tracking, information fusion, optical flow computation, learning for nonstationary video data, novelty detection in dynamic backgrounds, background modeling, grouping using feature uncertainty, and crowd segmentation from video. We wish to thank the authors of all submitted papers for their interest in the workshop.

We also wish to thank the members of our program committee and the external reviewers for their commitment of time and effort in providing valuable recommendations for each submission. We are thankful to Vaclav Hlavac, the General Chair of ECCV 2004, and to Radim Sara, for the local organization of the workshop and registration management. We hope you will find these proceedings both inspiring and of high scientific quality.
