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Titolo	Advances in Visual Computing [[electronic resource]] : First International Symposium, ISVC 2005, Lake Tahoe, NV, USA, December 5-7, 2005, Proceedings / / edited by Richard Boyle, Darko Koracin, Bahram Parvin
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Collana	Image Processing, Computer Vision, Pattern Recognition, and Graphics ; ; 3804
Disciplina	005.1/18
Soggetti	Artificial intelligence Pattern recognition Algorithms Computer graphics Optical data processing Artificial Intelligence Pattern Recognition Algorithm Analysis and Problem Complexity Computer Graphics Image Processing and Computer Vision
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	An NPR Technique for Pointillistic and Mosaic Images with Impressionist Color Arrangement -- Active View Optimization for Viewing Objects in Motion -- Adding Hand Motion to the Motion Capture Based Character Animation -- Oversimplified Euler Operators for a Non-oriented, Non-manifold B-Rep Data Structure -- The Number of Gaps in Binary Pictures -- Video Codec for Classical Cartoon Animations with Hardware Accelerated Playback -- Retinal Image Registration for NIH's ETDRS -- Using Multimodal MR Data for Segmentation and Topology Recovery of the Cerebral Superficial Venous Tree -- Loop Removal from Colon Central Path Through Skeleton Scale-Space Tracking --

Multiscale Segmentation of HRCT Images Using Bipolar Incoherent Filtering -- Building Statistical Atlas of White Matter Fiber Tract Based on Vector/Tensor Field Reconstruction in Diffusion Tensor MRI -- Interactive 3D Heart Chamber Partitioning with a New Marker-Controlled Watershed Algorithm -- Inferring Cause/Effect Relationships in Multi-sensor Ambient Intelligence Systems -- Toward a Unified Probabilistic Framework for Object Recognition and Segmentation -- Distributed Multi-camera Surveillance for Aircraft Servicing Operations -- Mining Paths of Complex Crowd Scenes -- Geometric and Photometric Analysis for Interactively Recognizing Multicolor or Partially Occluded Objects -- A Three-Level Graph Based Interactive Volume Segmentation System -- Self-organizing Deformable Model: A New Method for Fitting Mesh Model to Given Object Surface -- Image-Based Deformation of Objects in Real Scenes -- Comparing Sphere-Tree Generators and Hierarchy Updates for Deformable Objects Collision Detection -- Simulating Complex Organ Interactions: Evaluation of a Soft Tissue Discrete Model -- Face Verification in Polar Frequency Domain: A Biologically Motivated Approach -- Face Alignment and Adaptive Weight Assignment for Robust Face Recognition -- Face Detection in Low-Resolution Images -- Investigating the Impact of Face Categorization on Recognition Performance -- A Novel Approach on Silhouette Based Human Motion Analysis for Gait Recognition -- A Hybrid HMM/DPA Adaptive Gesture Recognition Method -- Hifocon: Object and Dimensional Coherence and Correlation in Multidimensional Visualization -- Efficient Compression of Visibility Sets -- Rendering Optimizations Guided by Head-Pose Estimates and Their Uncertainty -- Acceptance of Visual Search Interfaces for the Web – Design and Empirical Evaluation of a Book Search Interface -- Distributed and Collaborative Biomedical Data Exploration -- Image Database Navigation: A Globe-Al Approach -- Viewpoint Interpolation Using an Ellipsoid Head Model for Video Teleconferencing -- Real-Time Video Annotations for Augmented Reality -- A Tree-Structured Model of Visual Appearance Applied to Gaze Tracking -- Emotional Expression in Virtual Agents Through Body Language -- Visual Tracking for Seamless 3D Interactions in Augmented Reality -- ARISupport – Interaction Support for Augmented Reality Systems -- Background Updating for Visual Surveillance -- Pattern Discovery for Video Surveillance -- Real-Time Crowd Density Estimation Using Images -- Automatic Robust Background Modeling Using Multivariate Non-parametric Kernel Density Estimation for Visual Surveillance -- Recognition of Complex Human Behaviors in Pool Environment Using Foreground Silhouette -- Adaptive Background Subtraction with Multiple Feedbacks for Video Surveillance -- A Vectorial Self-dual Morphological Filter Based on Total Variation Minimization -- Wavelet Transform Based Gaussian Point Spread Function Estimation -- One-Point Hexagonal Inner Search for Fast Motion Estimation -- Self-Describing Context-Based Pixel Ordering -- Lossless Compression of CCD Sensor Data -- Geometric Approach to Segmentation and Protein Localization in Cell Cultured Assays -- Multi-level Thresholding Using Entropy-Based Weighted FCM Algorithm in Color Image -- Adaptive Robust Structure Tensors for Orientation Estimation and Image Segmentation -- Structural and Textural Skeletons for Noisy Shapes -- Accurate and Efficient Computation of High Order Zernike Moments -- 3D Model Generation from Image Sequences Using Global Geometric Constraint -- Efficient Shot Boundary Detection for Action Movies Using Blockwise Motion-Based Features -- Text Localization and Extraction from Complex Color Images -- Using Linguistic Models for Image Retrieval -- Content-Based Image Retrieval Via Vector Quantization -- Multi-aspect Target

Tracking in Image Sequences Using Particle Filters -- Segmentation and Recognition of Traffic Signs Using Shape Information -- Detection and Tracking Multiple Pedestrians from a Moving Camera -- Event Detection in Underground Stations Using Multiple Heterogeneous Surveillance Cameras -- Large-Scale Geospatial Indexing for Image-Based Retrieval and Analysis -- An Interactive Visualization Method for Integrating Digital Elevation Models and Geographic Information Systems Vector Layers -- Splines Interpolation in High Resolution Satellite Imagery -- Tool for Storm Analysis Using Multiple Data Sets -- 3D Modeling and Adaptation for Virtual Heritage System -- Direct Point Rendering on GPU -- An Artistic Portrait Caricature Model -- Capturing and View-Dependent Rendering of Billboard Models -- Error-Bounded Solid Voxelization for Polygonal Model Based on Heuristic Seed Filling -- Riemannian Mean Curvature Flow -- 3D Shape from Unorganized 3D Point Clouds -- 3D Hand Pose Reconstruction with ISOSOM -- A Motion Capture System for Sign Language Synthesis: Overview and Related Issues -- Dynamic Visualization of Spatially Referenced Information -- WYSIWYG-Tool Tips: Enhancing Tool Tips with Translucent Preview Bitmaps -- Motion Visualization of Ultrasound Imaging -- Two Novel Complete Sets of Similarity Invariants -- Detection of Text Region and Segmentation from Natural Scene Images -- ARM Based Microcontroller for Image Capturing in FPGA Design -- Contraction Mapping Calibration -- Discrimination of Natural Contours by Means of Time-Scale-Frequency Decompositions -- Color and Edge Refinement Method for Content Based Image Retrieval -- Selecting a Discriminant Subset of Co-occurrence Matrix Features for Texture-Based Image Retrieval -- An Automatic Relevance Feedback in Image Retrieval Using Belief Functions -- A Fast Full Search Algorithm for Variable Block-Based Motion Estimation of H.264 -- Adaptive Switching Linear Predictor for Lossless Image Compression -- Toward Real Time Fractal Image Compression Using Graphics Hardware -- Motion Based Segmentation Using MPEG Streams and Watershed Method -- Efficient Depth Edge Detection Using Structured Light -- Image Smoothing and Segmentation by Graph Regularization.

Sommario/riassunto

It is with great pleasure that I welcome you to Lake Tahoe for the 2005 Int- national Symposium on Visual Computing (ISVC). ISVC provides a common umbrella for the four main areas of visual computing: vision, graphics, visu- ization, and virtual reality. The goal of ISVC is to provide a common forum for researchers, scientists, engineers, and practitioners throughout the world to present their latest research ? ndings, ideas, developments, and applications in the broader area of visual computing. The program consists of six oral sessions, two poster sessions, seven special tracks,fourkeynotepresentations, andoneinvitedpresentation.Theresponseto thecallforpapersforthegeneralISVC2005sessionswasverygood. Wereceived over110submissionsfromwhichweaccepted33papersfororalpresentation and 26 papers for poster presentation. Special track papers were solicited separately through the organizing and program committees of each track. A total of 32 papers were accepted for inclusion in the special tracks. All papers were reviewed with an emphasis on their potential to contribute to the state of the art in the ?eld. Selection criteria included accuracy and originality of ideas, clarity and signi? cance of results, and presentation qu- ity. The review process was quite rigorous, involving two or three independent double-blind reviews followed by a one-week discussion period. During the d- cussion period we tried to correct anomalies and errors that might have existed in the initial reviews. Despite our e?orts, we recognize that some papers

worthy of inclusion may not have been included in the program. We o? er our sincere apologies to authors whose contributions might have been overlooked.

Iwishtothankeverybodywhosubmittedtheirworkto ISVC2005forreview.