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Nota di contenuto	Multiple Description Coding for Robust Video Transmission Over Wireless Ad-Hoc Networks -- Emotion-Based Textile Indexing Using Colors, Texture and Patterns -- Affine Camera for 3-D Retinal Surface Reconstruction -- The Diagnostic Application of Brain Image Processing and Analysis System for Ischemic Stroke -- Development of Early Tunnel Fire Detection Algorithm Using the Image Processing -- Simulation of Artificial Winds Using a Hardware Illumination Technique -- Learning for Multi-view 3D Tracking in the Context of Particle Filters -- Improving Brightness for a Multi-projector Display Considering Image Content -- VirtualQWERTY: Textual Communication in Virtual Reality -- Networked Heterogeneous Camera System for High Resolution Face Images -- A New Method for Approximating Optimal Parameterization of Polynomial Curves -- Interpolation by Piecewise Quadric Polynomial to Scattered Data Points -- Detection and Localization of the Top Object in the Stack of Objects -- Recognition of 3D Object Using Attributed Relation Graph of Silhouette's Extended Convex Hull -- Image Retrieval by Local Contrast Patterns and Color -- A VR Game Platform Built Upon Wireless Sensor Network -- Feature Extraction and Selection for Recognizing Humans by Their Gait --

Rectification of Illumination in Images Used for Shape from Focus -- Bilateral Edge Detection on a Virtual Hexagonal Structure -- Issues and Implementation of C 1 and C 2 Natural Neighbor Interpolation -- Iris Recognition Using a Low Level of Details -- Dynamic Reconstruction of Complex Planar Objects on Irregular Isothetic Grids -- Layout of Multiple Views for Volume Visualization: A User Study -- Video Indexing and Retrieval in Compressed Domain Using Fuzzy-Categorization -- Computing Homology for Surfaces with Generalized Maps: Application to 3D Images -- Dynamic Texture Analysis and Synthesis Using Tensor Decomposition -- Color Pair Clustering for Texture Detection -- CPU-GPU Multithreaded Programming Model: Application to the Path Tracing with Next Event Estimation Algorithm -- Real-Time and Robust Monocular SLAM Using Predictive Multi-resolution Descriptors -- A Faster Graph-Based Segmentation Algorithm with Statistical Region Merge -- Sensor Fusion Based Obstacle Detection/Classification for Active Pedestrian Protection System -- Combinatorial Pyramids and Discrete Geometry for Energy-Minimizing Segmentation -- Fast Dense Stereo Matching Using Adaptive Window in Hierarchical Framework -- A New Photographing Apparatus for Skin Maps of Human Face Rendering -- Investigating the Dynamics of Facial Expression -- GLOBAL Topology Preservation in Isosurface Extraction of Volumetric Data -- Real-Time Model-Based SLAM Using Line Segments -- Feature Correspondences from Multiple Views of Coplanar Ellipses -- Evaluation of Subpixel Tracking Algorithms -- Adaptive Real-Time Rendering for Large-Scale Molecular Models -- An Efficient Algorithm for Connected Attribute Thinnings and Thickenings -- Creating Multi-layered 3D Images Using Reversible Jump MCMC Algorithms -- A Multi-Modal Interface for Road Planning Tasks Using Vision, Haptics and Sound -- Venation Pattern Analysis of Leaf Images -- A Mobile Low-Cost Motion Capture System Based on Accelerometers -- Fusing Individual Algorithms and Humans Improves Face Recognition Accuracy -- A Method for the Automatic Analysis of Colour Category Pixel Shifts During Dichromatic Vision -- Rendering Dynamic Real-World Scenes Using Image Spheres -- Arithmetic Discrete Parabolas -- Retinal Spot Lesion Detection Using Adaptive Multiscale Morphological Processing -- Iterative Closest SIFT Formulation for Robust Feature Matching -- Invertible Polygonalization of 3D Planar Digital Curves and Application to Volume Data Reconstruction -- Lateral and Depth Calibration of PMD-Distance Sensors -- Autonomous Vehicle Video Aided Navigation – Coupling INS and Video Approaches -- A Method of Improving Cloud Predictions for Real-Time Weather Forecasting and Visualization -- An Efficient Hardware Architecture for Full-Search Variable Block Size Motion Estimation in H.264/AVC -- A Domain Reduction Algorithm for Incremental Projective Reconstruction -- An Automated Procedure for Word Balloon Placement in Cinema Comics -- Segmentation of Three Dimensional Cell Culture Models from a Single Focal Plane -- A Semi-automatic 3D Reconstruction Algorithm for Telepresence -- Motion Detection Using an Improved Colour Model -- Combining Pixelization and Dimensional Stacking -- Detection and Characterization of Abnormal Vascular Patterns in Automated Cervical Image Analysis -- Towards a Modular Network-Distributed Mixed-Reality Learning Space System -- Real-Time Multi-view 3D Object Tracking in Cluttered Scenes -- Visualizing Natural Stereo Images in Short Distance: A New Approach -- Next Best View Algorithms for Interior and Exterior Model Acquisition -- An Experiential Approach to Interacting with Biological Information -- Convex Shapes and Convergence Speed of Discrete Tangent Estimators -- Towards Obtaining an Ideal Real Time Panoramic

Video -- Object Recognition Using Local Descriptors: A Comparison -- Improving Spatiotemporal Inpainting with Layer Appearance Models -- Edge Detection Using a Complex-Valued Directional Vector Representation -- Analysis and Design of Graphical Password Techniques -- Viewing Scenes Occluded by Smoke -- A Non-photorealistic Rendering of Seurat's Pointillism -- Semantically Relevant Image Retrieval by Combining Image and Linguistic Analysis -- A New Algorithm for Solid Texture Synthesis -- What Can We Learn from Biological Vision Studies for Human Motion Segmentation? -- 3D Geometry from Uncalibrated Images -- Hierarchical Image Database Navigation on a Hue Sphere -- Image-Based Informatics for Preclinical Biomedical Research -- Segmentation-Based Registration of Organs in Intraoperative Video Sequences -- On Asymmetric Classifier Training for Detector Cascades -- Active Stabilization of Images Acquired on a Walking Robotic Platform -- Motion Estimation with Edge Continuity Constraint for Crowd Scene Analysis -- Perceptual Grouping Based on Iterative Multi-scale Tensor Voting -- Fast Prediction Mode Decision Algorithm for H.264 Based on Hierarchical Mode Classification Framework -- Camera Self-calibration in Scheimpflug Condition for Air Flow Investigation.

Sommario/riassunto

It is with great pleasure that we welcome you all to the proceedings of the 2nd InternationalSymposiumonVisualComputing(ISVC2006) heldinLakeTahoe. Followinga successfulmeeting lastyear,wewitnesseda muchstrongerandmore productive event this year. ISVC o?ers a common umbrella for the four main areas of visual computing including vision, graphics, visualization, and virtual reality. Its goal is to provide a forum for researchers, scientists, engineers and practitionersthroughouttheworldtopresenttheirlatestresearch?ndings, ideas, developments and applications in the broader area of visual computing. This year, the program consisted of 13 oral sessions, one poster session, ten special tracks, and six keynote presentations. The response to the call for - pers was very strong. We received more than twice the papers received last year. Speci?cally, we received over 280 submissions for the main symposium from which we accepted 65 papers for oral presentation (23% acceptance) and 56 papers for poster presentation (20% acceptance). Special track papers were solicited separately through the Organizing and Program Committees of each track. A total of 57 papers were accepted for presentation in the special tracks. All papers were reviewed with an emphasis on 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 quality. The review process was quite rigorous, involving two to three independent blind reviews followed by several days of discussion. During the discussion period we tried to correct anomalies and errors that might have existed in the initial reviews.