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Nota di contenuto	ST: Computational Bioimaging I -- Ontology-Driven Image Analysis for Histopathological Images -- Attribute-Filtering and Knowledge Extraction for Vessel Segmentation -- A Human Inspired Local Ratio-Based Algorithm for Edge Detection in Fluorescent Cell Images -- A Non-rigid Multimodal Image Registration Method Based on Particle Filter and Optical Flow -- Stitching of Microscopic Images for Quantifying Neuronal Growth and Spine Plasticity -- Computer Graphics I -- Semi-uniform, 2-Different Tessellation of Triangular

Parametric Surfaces -- Fast and Reliable Decimation of Polygonal Models Based on Volume and Normal Field -- Lattice-Boltzmann Water Waves -- A Texture-Based Approach for Hatching Color Photographs -- Camera Pose Estimation Based on Angle Constraints -- Feature-Preserving 3D Thumbnail Creation with Voxel-Based Two-Phase Decomposition -- ST: Behavior Detection and Modeling -- Learning Scene Entries and Exits Using Coherent Motion Regions -- Adding Facial Actions into 3D Model Search to Analyse Behaviour in an Unconstrained Environment -- Aggregating Low-Level Features for Human Action Recognition -- Incorporating Social Entropy for Crowd Behavior Detection Using SVM -- Introducing a Statistical Behavior Model into Camera-Based Fall Detection -- ST: Low-Level Color Image Processing -- On Contrast-Preserving Visualisation of Multispectral Datasets -- Color Gamut Extension by Projector-Camera System -- Shading Attenuation in Human Skin Color Images -- Color Constancy Algorithms for Object and Face Recognition -- Chromatic Sensitivity of Illumination Change Compensation Techniques -- Study on Image Color Stealing in Log-Polar Space -- Feature Extraction and Matching -- How to Overcome Perceptual Aliasing in ASIFT? -- Speeding Up HOG and LBP Features for Pedestrian Detection by Multiresolution Techniques -- Utilizing Invariant Descriptors for Finger Spelling American Sign Language Using SVM -- Bivariate Feature Localization for SIFT Assuming a Gaussian Feature Shape -- Linear Dimensionality Reduction through Eigenvector Selection for Object Recognition -- Symmetry Enhanced Adaboost -- Object Category Classification Using Occluding Contours -- Visualization I -- Fractal Map: Fractal-Based 2D Expansion Method for Multi-scale High-Dimensional Data Visualization -- Visual Network Analysis of Dynamic Metabolic Pathways -- Interpolating 3D Diffusion Tensors in 2D Planar Domain by Locating Degenerate Lines -- Indented Pixel Tree Plots -- Visualizing Multivariate Hierarchic Data Using Enhanced Radial Space-Filling Layout -- An Efficient Method for the Visualization of Spectral Images Based on a Perception-Oriented Spectrum Segmentation -- A New Marching Cubes Algorithm for Interactive Level Set with Application to MR Image Segmentation -- Motion and Tracking -- Attention-Based Target Localization Using Multiple Instance Learning -- Introducing Fuzzy Spatial Constraints in a Ranked Partitioned Sampling for Multi-object Tracking -- Object Tracking and Segmentation in a Closed Loop -- Optical Flow Estimation with Prior Models Obtained from Phase Correlation -- Conservative Motion Estimation from Multi-image Sequences -- Gradient-Based Modified Census Transform for Optical Flow -- Depth Assisted Occlusion Handling in Video Object Tracking -- ST: Unconstrained Biometrics: Advances and Trends -- Acquisition Scenario Analysis for Face Recognition at a Distance -- Enhancing Iris Matching Using Levenshtein Distance with Alignment Constraints -- A Mobile-Oriented Hand Segmentation Algorithm Based on Fuzzy Multiscale Aggregation -- Analysis of Time Domain Information for Footstep Recognition -- Shaped Wavelets for Curvilinear Structures for Ear Biometrics -- Face Recognition Using Sparse Representations and Manifold Learning -- Face Recognition in Videos Using Adaptive Graph Appearance Models -- ST: Computational Bioimaging II -- A Spatial-Temporal Frequency Approach to Estimate Cardiac Motion -- Mitosis Extraction in Breast-Cancer Histopathological Whole Slide Images -- Predicting Segmentation Accuracy for Biological Cell Images -- Multiscale Analysis of Volumetric Motion Field Using General Order Prior -- A Multi-relational Learning Approach for Knowledge Extraction in in Vitro Fertilization Domain -- Computer Graphics II -- Reconstruction of Spectra Using Empirical Basis Functions --

Experimental Study on Approximation Algorithms for Guarding Sets of Line Segments -- Toward an Automatic Hole Characterization for Surface Correction -- A Local-Frame Based Method for Vector Field Construction on Raw Point Cloud -- Preprocessed Global Visibility for Real-Time Rendering on Low-End Hardware -- A Spectral Approach to Nonlocal Mesh Editing -- ST: 3D Mapping, Modeling and Surface Reconstruction -- Markov Random Field-Based Clustering for the Integration of Multi-view Range Images -- Robust Wide Baseline Scene Alignment Based on 3D Viewpoint Normalization -- Modified Region Growing for Stereo of Slant and Textureless Surfaces -- Synthetic Shape Reconstruction Combined with the FT-Based Method in Photometric Stereo -- Lunar Terrain and Albedo Reconstruction of the Apollo 15 Zone -- Super-Resolution Mosaicking of Unmanned Aircraft System (UAS) Surveillance Video Using Levenberg Marquardt (LM) Algorithm -- Virtual Reality I -- Computer-Generated Tie-Dyeing Using a 3D Diffusion Graph -- VR Menus: Investigation of Distance, Size, Auto-scale, and Ray Casting vs. Pointer-Attached-to-Menu -- Contact Geometry and Visual Factors for Vibrotactile-Grid Location Cues -- Computer-Assisted Creation of 3D Models of Freeway Interchanges -- Automatic Learning of Gesture Recognition Model Using SOM and SVM.

Sommario/riassunto

It is with great pleasure that we present the proceedings of the 6th International, Symposium on Visual Computing (ISVC 2010), which was held in Las Vegas, Nevada. ISVC provides a common umbrella for the four main areas of visual computing including vision, graphics, visualization, and virtual reality. The goal is to provide a forum for researchers, scientists, engineers, and practitioners throughout the world to present their latest research findings, ideas, developments, and applications in the broader area of visual computing. This year, the program consisted of 14 oral sessions, one poster session, 7 special tracks, and 6 keynote presentations. The response to the call for papers was very good; we received over 300 submissions for the main symposium from which we accepted 93 papers for oral presentation and 73 papers for poster presentation. Special track papers were solicited separately through the Organizing and Program Committees of each track. A total of 44 papers were accepted for oral presentation and 6 papers for poster presentation in the special tracks.
