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Collana	Image Processing, Computer Vision, Pattern Recognition, and Graphics ; ; 6454
Disciplina	005.1
Soggetti	Software engineering Life sciences Pattern recognition Bioinformatics Computer graphics Optical data processing Software Engineering/Programming and Operating Systems Life Sciences, general Pattern Recognition Computational Biology/Bioinformatics Computer Graphics Computer Imaging, Vision, Pattern Recognition and Graphics
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Calibration, Pose Estimation, and Reconstruction -- Multiple Camera Self-calibration and 3D Reconstruction Using Pedestrians -- Robust Radial Distortion from a Single Image -- Projective Reconstruction of General 3D Planar Curves from Uncalibrated Cameras -- A Novel

Photometric Method for Real-Time 3D Reconstruction of Fingerprint --
3D Camera Pose Estimation Using Line Correspondences and 1D
Homographies -- Near-Optimal Selection of Views and Surface Regions
for ICP Pose Estimation -- Segmentation -- Region and Edge-Adaptive
Sampling and Boundary Completion for Segmentation -- Universal Seed
Skin Segmentation -- A Sharp Concentration-Based Adaptive
Segmentation Algorithm -- Segmentation for Hyperspectral Images
with Priors -- The Curve Filter Transform – A Robust Method for Curve
Enhancement -- Split Bregman Method for Minimization of Region-
Scalable Fitting Energy for Image Segmentation -- Stereo -- A
Correlation-Based Approach for Real-Time Stereo Matching --
Photometric Stereo under Low Frequency Environment Illumination --
Simultaneous Vanishing Point Detection and Camera Calibration from
Single Images -- Inferring Planar Patch Equations from Sparse View
Stereo Images -- Single Camera Stereo System Using Prism and Mirrors
-- A Region-Based Randomized Voting Scheme for Stereo Matching --
Virtual Reality II -- Adaptive Neighbor Pairing for Smoothed Particle
Hydrodynamics -- System Structures for Efficient Rendering in Virtual
Worlds and Virtual Testbeds -- Prismfields: A Framework for Interactive
Modeling of Three Dimensional Caves -- Efficient Marker Matching
Using Pair-Wise Constraints in Physical Therapy -- Learning and
Prediction of Soft Object Deformation Using Visual Analysis of Robot
Interactions -- Registration -- A Novel Consistency Regularizer for
Meshless Nonrigid Image Registration -- Robust Rigid Shape
Registration Method Using a Level Set Formulation -- A Meshless
Method for Variational Nonrigid 2-D Shape Registration -- A New
Simple Method to Stitch Images with Lens Distortion -- Robust
Mosaicking of Stereo Digital Elevation Models from the Ames Stereo
Pipeline -- Medical Imaging -- Tissue Fate Prediction in Acute Ischemic
Stroke Using Cuboid Models -- 3D Vector Flow Guided Segmentation of
Airway Wall in MSCT -- Graph-Based Segmentation of Lymph Nodes in
CT Data -- Electron Microscopy Image Segmentation with Graph Cuts
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Retinal Vessel Extraction with the Image Ray Transform -- Automatic
Liver Segmentation from CT Scans Using Multi-layer Segmentation and
Principal Component Analysis -- ST: Low Cost Virtual Reality:
Expanding Horizons -- Low Cost VR Meets Low Cost Multi-touch --
IQ-Station: A Low Cost Portable Immersive Environment -- A Fiducial-
Based Tangible User Interface for White Matter Tractography --
Immersive Molecular Visualization and Interactive Modeling with
Commodity Hardware -- ST: Best Practices in Teaching Visual
Computing -- Multi-institutional Collaboration in Delivery of Team-
Project-Based Computer Graphics Studio Courses -- A Workflow Based
Process Visual Analyzer (ProVisZer) for Teaching and Learning --
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Laser Scanner Acquisition Pipeline -- Creating Passion for Augmented
Reality Applications – A Teaching Concept for a Lab Course --
Applications -- Object Material Classification by Surface Reflection
Analysis with a Time-of-Flight Range Sensor -- Retrieving Images of
Similar Geometrical Configuration -- An Analysis-by-Synthesis
Approach to Rope Condition Monitoring -- Fast Parallel Model
Estimation on the Cell Broadband Engine -- Organizing and Browsing
Image Search Results Based on Conceptual and Visual Similarities --
Evaluation of a Difference of Gaussians Based Image Difference Metric
in Relation to Perceived Compression Artifacts -- Visualization II --
Distance Field Illumination: A Rendering Method to Aid in Navigation of
Virtual Environments -- Indirect Shader Domain Rendering -- Visual
Exploration of Stream Pattern Changes Using a Data-Driven Framework

-- RibbonView: Interactive Context-Preserving Cutaways of Anatomical Surface Meshes -- Interactive Visualisation of Time-Based Vital Signs -- Using R-Trees for Interactive Visualization of Large Multidimensional Datasets -- Combining Automated and Interactive Visual Analysis of Biomechanical Motion Data -- Video Analysis and Event Recognition -- Human Activity Recognition: A Scheme Using Multiple Cues -- A Platform for Monitoring Aspects of Human Presence in Real-Time -- Egocentric Visual Event Classification with Location-Based Priors -- View Invariant Activity Recognition with Manifold Learning -- Arm-Hand Behaviours Modelling: From Attention to Imitation -- Hand Detection and Gesture Recognition Exploit Motion Times Image in Complicate Scenarios -- Face Verification Using Indirect Neighbourhood Components Analysis -- Poster Session -- Efficient Algorithms for Image and High Dimensional Data Processing Using Eikonal Equation on Graphs -- 3D DCT Based Compression Method for Integral Images -- Plant Texture Classification Using Gabor Co-occurrences -- A Compressive Sensing Algorithm for Many-Core Architectures -- An Incremental PCA-HOG Descriptor for Robust Visual Hand Tracking -- Probabilistic Learning of Visual Object Composition from Attended Segments -- Propagating Uncertainty in Petri Nets for Activity Recognition -- Mixture of Gaussians Exploiting Histograms of Oriented Gradients for Background Subtraction -- Human Pose Recognition Using Chamfer Distance in Reduced Background Edge for Human-Robot Interaction -- Modeling Clinical Tumors to Create Reference Data for Tumor Volume Measurement -- Spectral Image Decolorization.

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.
