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Nota di contenuto	Color Analysis -- On Determining the Color of the Illuminant Using the Dichromatic Reflection Model -- Probabilistic Color Optical Flow -- Illumination Invariant Color Texture Analysis Based on Sum- and Difference-Histograms -- Color Image Compression: Early Vision and the Multiresolution Representations -- Stereo Vision -- Optic Flow Goes Stereo: A Variational Method for Estimating Discontinuity-Preserving Dense Disparity Maps -- Lens Model Selection for Visual Tracking -- Omnidirectional Vision with Frontal Stereo -- Stereo Vision Based Reconstruction of Huge Urban Areas from an Airborne Pushbroom Camera (HRSC) -- Calibration–Free Hand–Eye Calibration: A

Structure–from–Motion Approach -- Invited Paper -- Simple Solvers for Large Quadratic Programming Tasks -- Segmentation and Grouping -- Voxel-Wise Gray Scale Invariants for Simultaneous Segmentation and Classification -- Automatic Foreground Propagation in Image Sequences for 3D Reconstruction -- Agglomerative Grouping of Observations by Bounding Entropy Variation -- Three-Dimensional Shape Knowledge for Joint Image Segmentation and Pose Estimation -- Goal-Directed Search with a Top-Down Modulated Computational Attention System -- Automatic Speech Understanding -- Telephone-Based Speech Dialog Systems -- Robust Parallel Speech Recognition in Multiple Energy Bands -- Pronunciation Feature Extraction -- Multi-lingual and Multi-modal Speech Processing and Applications -- 3D View Registration and Surface Modeling -- Cluster-Based Point Cloud Analysis for Rapid Scene Interpretation -- A Novel Parameter Decomposition Approach to Faithful Fitting of Quadric Surfaces -- 3D Surface Reconstruction by Combination of Photopolarimetry and Depth from Defocus -- Vision-Based 3D Object Localization Using Probabilistic Models of Appearance -- Projective Model for Central Catadioptric Cameras Using Clifford Algebra -- A New Methodology for Determination and Correction of Lens Distortion in 3D Measuring Systems Using Fringe Projection -- A Method for Fast Search of Variable Regions on Dynamic 3D Point Clouds -- 6D-Vision: Fusion of Stereo and Motion for Robust Environment Perception -- A Method for Determining Geometrical Distortion of Off-The-Shelf Wide-Angle Cameras -- Motion and Tracking -- A System for Marker-Less Human Motion Estimation -- A Fast Algorithm for Statistically Optimized Orientation Estimation -- A Direct Method for Real-Time Tracking in 3-D Under Variable Illumination -- Efficient Combination of Histograms for Real-Time Tracking Using Mean-Shift and Trust-Region Optimization -- Spiders as Robust Point Descriptors -- A Comparative Evaluation of Template and Histogram Based 2D Tracking Algorithms -- Bayesian Method for Motion Segmentation and Tracking in Compressed Videos -- Nonlinear Body Pose Estimation from Depth Images -- Computational Learning -- Conservative Visual Learning for Object Detection with Minimal Hand Labeling Effort -- Rapid Online Learning of Objects in a Biologically Motivated Recognition Architecture -- Semidefinite Clustering for Image Segmentation with A-priori Knowledge -- Separable Linear Discriminant Classification -- Improving a Discriminative Approach to Object Recognition Using Image Patches -- Comparison of Multiclass SVM Decomposition Schemes for Visual Object Recognition -- Shape Priors and Online Appearance Learning for Variational Segmentation and Object Recognition in Static Scenes -- Over-Complete Wavelet Approximation of a Support Vector Machine for Efficient Classification -- Regularization on Discrete Spaces -- Recognition of 3D Objects by Learning from Correspondences in a Sequence of Unlabeled Training Images -- Self-learning Segmentation and Classification of Cell-Nuclei in 3D Volumetric Data Using Voxel-Wise Gray Scale Invariants -- Applications -- License Plate Character Segmentation Using Hidden Markov Chains -- Digital Subtraction CT Lung Perfusion Image Based on 3D Affine Registration -- Combination of Tangent Distance and an Image Distortion Model for Appearance-Based Sign Language Recognition -- Volumetric Analysis of a Sinter Process in Time -- Network Snakes-Supported Extraction of Field Boundaries from Imagery -- Structure Features for Content-Based Image Retrieval -- Blind Background Subtraction in Dental Panoramic X-Ray Images: An Application Approach -- Robust Head Detection and Tracking in Cluttered Workshop Environments Using GMM -- Uncertainty and

Robustness -- Stability and Local Feature Enhancement of Higher Order Nonlinear Diffusion Filtering -- Estimation of Geometric Entities and Operators from Uncertain Data -- Wiener Channel Smoothing: Robust Wiener Filtering of Images -- Signal and Noise Adapted Filters for Differential Motion Estimation -- Variational Deblurring of Images with Uncertain and Spatially Variant Blurs -- Energy Tensors: Quadratic, Phase Invariant Image Operators -- Invited Paper -- Object Categorization and the Need for Many-to-Many Matching.

Sommario/riassunto

It is both an honor and a pleasure to hold the 27th Annual Meeting of the German Association for Pattern Recognition, DAGM 2005, at the Vienna University of Technology, Austria, organized by the Pattern Recognition and Image Processing (PRIP) Group. We received 122 contributions of which we were able to accept 29 as oral presentations and 31 as posters. Each paper received three reviews, upon which decisions were made based on correctness, presentation, technical depth, scientific significance and originality. The selection as oral or poster presentation does not signify a quality grading but reflects attractiveness to the audience which is also reflected in the order of appearance of papers in these proceedings. The papers are printed in the same order as presented at the symposium and posters are integrated in the corresponding thematic session. In putting these proceedings together, many people played significant roles which we would like to acknowledge. First of all our thanks go to the authors who contributed their work to the symposium. Second, we are grateful for the dedicated work of the 38 members of the Program Committee for their effort in evaluating the submitted papers and in providing the necessary decision support information and the valuable feedback for the authors. Furthermore, the Program Committee awarded prizes for the best papers, and we want to sincerely thank the donors. We were honored to have the following three invited speakers at the conference: – Jan P.