

Contents

ix	<i>Authors</i>
xiii	<i>Conference Committee</i>
xv	<i>Introduction</i>

SESSION 1 FACE RECOGNITION

9443 02	Two-dimensional discriminant neighborhood preserving embedding in face recognition [9443-7]
9443 03	A review of recent advances in 3D face recognition [9443-16]
9443 04	Supervised descent method with low rank and sparsity constraints for robust face alignment [9443-27]
9443 05	Hardware-software face detection system based on multi-block local binary patterns [9443-28]
9443 06	Particle swarm optimization-based articulated human pose tracking using enhanced silhouette extraction [9443-46]
9443 07	Gestalt interest points for image description in weight-invariant face recognition [9443-52]
9443 08	Combining appearance and geometric features for facial expression recognition [9443-56]
9443 09	Toward retail product recognition on grocery shelves [9443-72]
9443 0A	An integrated modeling approach to age invariant face recognition [9443-121]
9443 0B	Online Farsi digit recognition using their upper half structure [9443-67]

SESSION 2 FEATURE DETECTION AND TARGET TRACKING

9443 0C	Fast ellipse detection by elliptical arcs extracting and grouping [9443-1]
9443 0D	Stereo vision-based pedestrian detection using dense disparity map-based detection and segmentation [9443-2]
9443 0E	Multi-lane detection based on multiple vanishing points detection [9443-15]
9443 0F	Edge detection and reduction of brightness of students' bubble form images [9443-40]
9443 0G	Detection and recognition of uneaten fish food pellets in aquaculture using image processing [9443-75]

- 9443 OH **Improved video copy detection algorithm based on multi-scale Harris feature points** [9443-76]
- 9443 OI **Detecting moving objects under a moving camera in complex environments** [9443-79]
- 9443 OJ **Abnormal behaviors detection using particle motion model** [9443-101]
- 9443 OK **A novel hybrid motion detection algorithm based on 2D histogram** [9443-132]
- 9443 OL **Infrared small target detection based on visual attention** [9443-150]
- 9443 OM **Saliency region and density maximization for salient object detection** [9443-155]
- 9443 ON **A framework for small infrared target real-time visual enhancement** [9443-31]
- 9443 OO **An approach for tissue density classification in mammographic images using artificial neural network based on wavelet and curvelet transforms** [9443-38]
- 9443 OP **An adaptive interval generation method for efficient distance coding of binary images** [9443-45]
- 9443 OQ **Research on target tracking in coal mine based on optical flow method** [9443-47]
- 9443 OR **Adaptive object tracking via both positive and negative models matching** [9443-86]
- 9443 OS **Missile placement analysis based on improved SURF feature matching algorithm** [9443-109]
- 9443 OT **A modified dual-band ratio temperature measurement method for remote target using temperature change information** [9443-19]
- 9443 OU **A vision framework for the localization of soccer players and ball on the pitch using Handycams** [9443-29]
- 9443 OV **Combined block-matching and adaptive differential motion estimation in a hierarchical multi-scale framework** [9443-83]
- 9443 OW **Vehicle tracking process based on combination of SURF and color feature** [9443-43]

SESSION 3 IMAGE PROCESSING

- 9443 OX **Image denoising using ridgelet shrinkage** [9443-4]
- 9443 OY **Sparse principle component analysis for single image super-resolution** [9443-18]
- 9443 OZ **Image quality assessment using Takagi-Sugeno-Kang fuzzy model** [9443-22]
- 9443 10 **A novel SAR fusion image segmentation method based on triplet Markov field** [9443-24]
- 9443 11 **An approach to the segmentation of multi-page document flow using binary classification** [9443-25]

- 9443 12 **Local homogeneity combined with DCT statistics to blind noisy image quality assessment** [9443-26]
- 9443 13 **KM_GrabCut: a fast interactive image segmentation algorithm** [9443-50]
- 9443 14 **Estimation of variance of sea surfaces slopes through the variance of the glitter patterns' images** [9443-55]
- 9443 15 **Effective and fully automatic image segmentation using quantum entropy and pulse-coupled neural networks** [9443-64]
- 9443 16 **Sparse representation using multiple dictionaries for single image super-resolution** [9443-65]
- 9443 17 **An image denoising algorithm based on clustering and median filtering** [9443-68]
- 9443 18 **Block-matching 3D transform-based multi-focus image fusion** [9443-17]
- 9443 19 **A combined image steganographic method using multi-way pixel-value differencing** [9443-69]
- 9443 1A **Multi-modal image fusion based on ROI and Laplacian Pyramid** [9443-119]
- 9443 1B **Image fusion based on fractional Fourier domain phase and amplitude** [9443-122]
- 9443 1C **A multi-scale fusion-based dark channel prior dehazing algorithm** [9443-131]
- 9443 1D **An optimizing processing approach to contrast correction based on nonlinear mapping of windowed tone** [9443-61]

SESSION 4 IMAGE ANALYSIS AND INFORMATION ENCRYPTION

- 9443 1E **Image haze removal algorithm for transmission lines based on weighted Gaussian PDF** [9443-125]
- 9443 1F **An improved Bayesian matting method based on image statistic characteristics** [9443-102]
- 9443 1G **Genetic algorithm for bundle adjustment in aerial panoramic stitching** [9443-41]
- 9443 1H **A new SVD-based fragile image watermarking by using genetic algorithm** [9443-53]
- 9443 1I **Dominant color correlogram descriptor for content-based image retrieval** [9443-54]
- 9443 1J **Weakly supervised glasses removal** [9443-33]
- 9443 1K **Satellite image scene classification using spatial information** [9443-11]
- 9443 1L **A comparative study on manifold learning of hyperspectral data for land cover classification** [9443-34]
- 9443 1M **A comparison of image inpainting techniques** [9443-36]

- 9443 1N **Example-based automatic generation of image filters and classifiers based on image-value pairs** [9443-49]
- 9443 1O **Learning self-adaptive color harmony model for aesthetic quality classification** [9443-95]
- 9443 1P **Image registration on fractional Fourier transform domain** [9443-134]
- 9443 1Q **A novel data hiding scheme for block truncation coding compressed images using dynamic programming strategy** [9443-135]
- 9443 1R **Artificial frame filling using adaptive neural fuzzy inference system for particle image velocimetry dataset** [9443-136]
- 9443 1S **Cropping and noise resilient steganography algorithm using secret image sharing** [9443-142]
- 9443 1T **A robust method for estimating motorbike count based on visual information learning** [9443-165]
- 9443 1U **Variational optical flow estimation for images with spectral and photometric sensor diversity** [9443-169]
- 9443 1V **Top-down vertical itemset mining** [9443-80]
- 9443 1W **Concave points for separating touching particles** [9443-161]

SESSION 5 MODELING AND VISUALIZATION

- 9443 1X **An efficient framework for modeling clouds from Landsat8 images** [9443-117]
- 9443 1Y **Heuristic-driven graph wavelet modeling of complex terrain** [9443-73]
- 9443 1Z **Modeling synthetic radar image from a digital terrain model** [9443-3]
- 9443 20 **Gaze estimation using a hybrid appearance and motion descriptor** [9443-37]
- 9443 21 **Anaglyph videoanimations from oblique stereoimages** [9443-48]
- 9443 22 **3D reconstruction and visualization of plant leaves** [9443-77]
- 9443 23 **Attitude measurement by using target Schlieren graph and 3D digital model in wind tunnel** [9443-85]
- 9443 24 **Design of 3D simulation engine for oilfield safety training** [9443-96]
- 9443 25 **Reconstruction of indoor scene from a single image** [9443-110]
- 9443 26 **Improved stereo matching applied to digitization of greenhouse plants** [9443-100]

SESSION 6 VIDEO ANALYSIS AND PROCESSING

- 9443 27 **An experimental evaluation of some background subtraction algorithms under a variety of video surveillance challenges** [9443-88]
- 9443 28 **Low complexity data duplication with selective slice dropping for reliable video communication** [9443-42]
- 9443 29 **Video object segmentation via adaptive threshold based on background model diversity** [9443-84]
- 9443 2A **Fast video super-resolution via sparse coding** [9443-114]
- 9443 2B **Real-time video analysis for retail stores** [9443-159]
- 9443 2C **A robust mean-shift tracking through occlusion and scale based on object trajectory for surveillance camera** [9443-103]
- 9443 2D **The application of autostereoscopic display in smart home system based on mobile devices** [9443-143]

SESSION 7 MEDICAL SIGNAL PROCESSING

- 9443 2E **Centerline-based vessel segmentation using graph cuts** [9443-57]
- 9443 2F **A statistical description of 3D lung texture from CT data** [9443-120]
- 9443 2G **Prediction of healthy blood with data mining classification by using Decision Tree, Naive Bayesian and SVM approaches** [9443-151]
- 9443 2H **Assessment of an ICA-based noise reduction method for multi-channel auditory evoked potentials** [9443-152]
- 9443 2I **Compensatory neurofuzzy model for discrete data classification in biomedical** [9443-156]
- 9443 2J **Pupil segmentation using active contour with shape prior** [9443-166]
- 9443 2K **A new algorithm for segmentation of cardiac quiescent phases and cardiac time intervals using seismocardiography** [9443-105]
- 9443 2L **SA-SVM based automated diagnostic system for skin cancer** [9443-62]

SESSION 8 SIGNAL PROCESSING

- 9443 2M **A self-adaptive anti-vibration pipeline-filtering algorithm** [9443-23]
- 9443 2N **Sensor signals monitoring and control using wavelets transform representation algorithm** [9443-35]

- 9443 2O **Groupwise surface correspondence using particle filtering** [9443-71]
- 9443 2P **Using neural networks in remote sensing monitoring of exogenous processes** [9443-44]
- 9443 2Q **Barcode localization with region-based gradient statistical analysis** [9443-6]
- 9443 2R **An artificial target location method for Curiosity rover** [9443-14]
- 9443 2S **Target confirmation and relocation using the correlation filter in mean shift tracking** [9443-98]
- 9443 2T **A novel color filter array and demosaicking algorithm for hexagonal grids** [9443-149]

SESSION 9 INFORMATION SYSTEMS AND IMAGE PROCESSING APPLICATIONS

- 9443 2U **Privacy protection in surveillance systems based on JPEG DCT baseline compression and spectral domain watermarking** [9443-20]
- 9443 2V **Intelligent elevator management system using image processing** [9443-90]
- 9443 2W **Fast color image matting by online active contour model** [9443-70]
- 9443 2X **Image authentication via sparsity-based phase-shifting digital holography** [9443-5]
- 9443 2Y **The optimization algorithm based knot and control point automatic adjustment** [9443-10]
- 9443 2Z **Towards relative gradient and its applications** [9443-124]
- 9443 30 **A color constancy model with minimum brightness variance assumption** [9443-145]
- 9443 31 **Robust interest points matching based on local description and spatial constraints** [9443-153]
- 9443 32 **A new improved local Chan-Vese model** [9443-154]
- 9443 33 **Visible-spectrum remote eye tracker for gaze communication** [9443-164]
- 9443 34 **Crystallization mosaic effect generation by superpixels** [9443-168]
- 9443 35 **The development of automated behavior analysis software** [9443-170]
- 9443 36 **Learning historical heritage with a serious game: a user study of Heerlen Roman bathhouse** [9443-39]