

2011 7th Iranian Conference on Machine Vision and Image Processing

(MVIP 2011)

**Tehran, Iran
16 – 17 November 2011**



**IEEE Catalog Number: CFP1175M-PRT
ISBN: 978-1-4577-1533-4**

TABLE OF CONTENTS

3D Object Categorization Based on Histogram of Distance and Normal Vector Angles on Surface Points	1
<i>Mohammad Ramezani, Hossein Ebrahimzad</i>	
A Denoising Algorithm Based on PDE Variational Approach Using PM Potential	6
<i>Hossein Khodabakhshi Rafsanjani, Saeid Saryazdi, Mohammad Hossein</i>	
A Fuzzy Approach for the Automatic Off-Line Persian Signature Verification Problem	11
<i>M. Nasiri, A. Javaheri</i>	
A Fuzzy Bit Allocation Algorithm for Variable Bit Rate Video Coding	16
<i>M. Shafei, M. Rezaei, S. Tavakoli, F. Mohanna</i>	
A Lexicon Reduction Method Based on Clustering Word Images in Offline Farsi Handwritten Word Recognition Systems	20
<i>Elham Bayesteh, Alireza Ahmadifard, Hossein Khosravi</i>	
A Modified FCM Algorithm for MRI Brain Image Segmentation	25
<i>Abolfazl Kouhi, Hadi Seyedarabi, Ali Aghagolzadeh</i>	
A Multilevel Thresholding Approach Based on Levy-Flight Firefly Algorithm	30
<i>Tahereh Hassanzadeh, Hakimeh Vojodi, Amir Masoud Eftekhari Moghadam</i>	
A New Dataset of Persian Handwritten Documents and Its Segmentation	35
<i>Alireza Alaei, P. Nagabhushan, Umapada Pal</i>	
A New Illumination-Invariant Method of Moving Object Detection for Video Surveillance Systems	40
<i>Elham Kermani, Davud Asemani</i>	
A New Image Compression Method Based on LBG Algorithm in DCT Domain	45
<i>Mahmood Shabanifard, Mahrokh G. Shayesteh</i>	
A New NSCT Based Contrast Enhancement Algorithm for Amplification of Early Signs of Ischemic Stroke in Brain CT Images	50
<i>Mehdi Sajjadi, Rassoul Amirfattahi, Mohammad Reza Ahmadzadeh</i>	
A Non Local Means Method Using Fuzzy Similarity Criteria for Restoration of Ultrasound Images	56
<i>Kamran Binaee, Reza P. R. Hasanazadeh</i>	
A Non-Destructive Defect Detection Method in Gas Pipes Using Thermal Image Processing	61
<i>Vahid Malekian, Aria Ahmadi, Rasoul Amirfattahi</i>	
A Non-Local Rician Noise Reduction Approach for 3-D Magnitude Magnetic Resonance Images	67
<i>Hosein M. Golshan, Reza Pr. Hasanazadeh</i>	
A Novel Approach for Pupil Diameter Measurement Based on Soft Computing Techniques	72
<i>F. Mokhayeri, S. Toosizadeh, M.-R. Akbarzadeh-T</i>	
A Novel Technique for Pupil Center Localization Based on Projective Geometry	77
<i>Mohammad Reza Mohammadi, Abolghasem Raie</i>	
A Robust Copyright Protection Scheme Based on Discrete Cosine Transform and Image Normalization	82
<i>Mahsa Shakeri, Mansour Jamzad</i>	
A Supervised Method for Determining Displacement of Gray Level Co-Occurrence Matrix	88
<i>Hassan Nikoo, Hossein Talebi, Abdolreza Mirzaei</i>	
Abnormality Detection and Traffic Flow Measurement Using a Hybrid Scheme of SIFT in Distributed Multi Camera Intersection Monitoring	93
<i>Peyman Babaie, Mahmood Fathy</i>	
Accurate Coronary Vessel Extraction Using Fast Directional Filter Bank	98
<i>Morteza Jalalat Vakilkandi, Mohammad Reza Ahmadzadeh, Rasoul Amirfattahi, Saeid Sadri</i>	
Adaptive Edge Detection Based on Interval-Valued Fuzzy Sets	103
<i>Vahid Aghighi, Mohammad-R. Akbarzadeh-T, Mahdi Yaghoobi, Hamidreza Pourreza</i>	
An Adaptive Short Time Beltrami Kernel for Image De-Noising	108
<i>Reza Vafae, Ahmad Hakimi, Saeid Saryazdi</i>	
An Automatic Contrast Enhancement Technique Using Combination of Histogram-Based Methods	113
<i>Roghayeh Soleymani, Mahrokh G. Shayesteh</i>	
An Automatic Solution for Unwanted Black Area Elimination in Photocopy Machines	118
<i>Mohammadreza Naeemabadi, Parisa Rabbani, Alireza Mehrdehnavi, Rahele Kafiyeh</i>	
An Ear Identification System Using Local-Gabor Features and KNN Classifier	123
<i>Ava Tahmasebi, Hossein Pourghassem, Homayoun Mahdavi-Nasab</i>	
An Effective Approach for Data Extraction from Antenna Polar Patterns	127
<i>Amir Tahmasbi, Sakine Jahangirzadeh, Seyed Mohammad Seyedzadeh, Fatemeh Saki, Shahriar B. Shokouhi</i>	

An Efficient Down-Sampling Method for Multiresolution Image Completion	131
<i>Seyed Mahdi Shariatzadeh, Shohreh</i>	
Apple Defect Detection Using Statistical Histogram Based Fuzzy C-Means Algorithm.....	138
<i>Ghobad Moradi, Mousa Shamsi, Mohammad Hossein Sedaaghi, Setareh Moradi</i>	
Automatic Identification of Overlapping/Touching Chromosomes in Microscopic Images Using Morphological Operators.....	143
<i>Sahar Jahani, S. Kamaledin Setarehdan, Emadedin Fatemizadeh</i>	
Automatic Paint Defect Detection and Classification of Car Body.....	147
<i>Parisa Kamani, Elaheh Noursadeghi, Ahmad Afshar, Farzad Towhidkhah</i>	
Blind Image Watermarking Using Wavelet Coefficient Distance.....	153
<i>Heidar Ebrahimi, Karim Ansari-Asl</i>	
Brain Tissue Segmentation by FCM and Dempster-Shafer Theory.....	158
<i>Jamal Ghasebi, Mohamad Reza Karami Mollaei, Reza Ghaderi, Ali Hojjatoleslami</i>	
Breast Cancer Detection Using BA-BP Based Neural Networks and Efficient Features.....	163
<i>Alireza Khosravi, Jalil Addeh, Javad Ganjipour</i>	
Camera Motion Modeling for Video Stabilization Performance Assessment.....	169
<i>M. J. Tanakian, M. Rezaei, F. Mohanna</i>	
Camera Selection for Reduction of Altitude Estimation Error Caused by Pixel Quantization	173
<i>Fahimeh Fooladgar, S. M. Reza Soroushmehr, Shadrokh Samavi</i>	
Chromosome Image Contrast Enhancement Using Adaptive, Iterative Histogram Matching.....	178
<i>Seyed Pooya Ehsani, Hojjat Seyed Mousavi, Babak H. Khalaj</i>	
Classification of Age Groups from Facial Image Using Histograms of Oriented Gradients.....	183
<i>Mohammad Ali Hajizadeh, Hossein Ebrahimnezhad</i>	
Classification of Rice Varieties Using Optimal Color and Texture Features and BP Neural Networks	188
<i>Seyed Jaleddin Mousavi Rad, Fardin Akhlaghian Tab, Kaveh Mollazade</i>	
Content-Based Image Retrieval for Tourism Application.....	193
<i>Zobeir Raisi, Farahnaz Mohanna, Mehdi Rezaei</i>	
Contour-Based Object Detection Using Max-Margin Hough Transform.....	198
<i>Maedeh Ahmadi, Maziar Palhang, Niloofar Gheissari</i>	
Contour-Based Video inpainting.....	203
<i>Amanna Ghanbari, Mohsen Soryani</i>	
Converting Every Surface to Touchscreen.....	208
<i>Vahid Soleimani, Mohammad Reza Ahmadvadeh Raji, Mohammad Ali Golshan</i>	
Detection and Correction of Invalid Slope Districts in Separatrix-Based Image Segmentation	213
<i>Shaadi Shidfar, Alan Colchester</i>	
Detection of Collagenous Colitis Based on Histopathology Image Segmentation of Colon	219
<i>Vahid Malekian, Mojgan Mokhtari, Saeid Sadri, Rasoul Amirfattahi, Alireza Aghaie</i>	
Digital Camera Identification by Modeling the Probability Distribution of Sensor Pattern Noise	224
<i>Fereshteh Gharibi, Javad Ravanjamjah, Bahram Zahirazami, Fardin Akhlaghian</i>	
Double Random Phase Encoding Method Using Interleaving Algorithm for Security Consideration.....	228
<i>Motahareh Taheri, Saeed Mozaffari</i>	
Dynamic Texture Segmentation Using Linear Predictive Coding.....	233
<i>Nima Forouzarfar, Hossein Ebrahimnezhad, Afshin Ebrahimi</i>	
EBIQA: An Edge Based Image Quality Assessment.....	238
<i>Abdolrahman Attar, Reza Moradi, Asadollah Shahbahrani</i>	
Effect of Different Diffusion Maps on Registration Results.....	242
<i>Maryam Afzali, Emad Fatemizadeh, Hamid Soltanian-Zadeh</i>	
Effective Supervised Classification of fMRI Activation Maps between Populations by Spatial Descriptors	247
<i>Shaghayegh Eshaghian, Gholam-Ali Hossein-Zadeh, Hamid Soltanian-Zadeh</i>	
Efficient Human Detection Based on Parallel Implementation of Gradient and Texture Feature Extraction Methods.....	252
<i>Masoud Farhadi, Seyed Ahmad Motamedi, Saeed Sharifian</i>	
Fractal and Multi-Fractal Dimensions for Farsi/Arabic Font Type and Size Recognition	257
<i>Akram Alsadat Hajiannezhad, Saeed Mozaffari</i>	
Gabor Wavelets and GVF Functions for Feature Extraction in Efficient Content Based Colour and Texture Images Retrieval.....	261
<i>Majid, Fakheri, Mehdi C. Amirani, Tohid Sedghi</i>	
Graph Regularized Nonnegative Matrix Factorization for Hyperspectral Data Unmixing.....	266
<i>Roosbeh Rajabi, Mahdi Khodadadzadeh, Hassan Ghassemian</i>	
Hierarchical Decision Tree (HDT) Approach for Image Annotation.....	270
<i>Ali Fakhari, Amir-Masoud Eftekhari-Moghaddam</i>	

Hierarchical Least Square Twin Support Vector Machines Based Framework for Human Action Recognition	275
<i>Kourosh Mozafari, Jalal A. Nasiri, Nasrollah Moghadam Charkari, Saeed Jalili</i>	
Histogram Based Reflection Detection	280
<i>Aria Ahmadi, Soodeh Ahani, Hanieh Khalilian, Iman Gholampour</i>	
Human Identification Using Motion Information and Digital Video Processing	285
<i>Bahareh Fadaei, Alireza Behrad</i>	
Improved Object Tracking Using Radial Basis Function Neural Networks	291
<i>Alireza Asvadi, Mohammadreza Karami-Mollaie, Yasser Baleghi, Hosein Seyyedi-Andi</i>	
Improvement of Supervised Shape Retrieval by Learning the Manifold Space	296
<i>Mohammad Ali Zare Chahooki, Nasrollah Moghadam Charkari</i>	
Lip Segmentation Using Geometrical Model of Color Distribution	300
<i>Mehrdad Shemshaki, Roya Amjadifard</i>	
MMRO: A Feature Selection Criterion for MR Images Based on Alpha Stable Filter Responses	305
<i>Reza Abbasi-Asl, Emad Fatemizadeh</i>	
Mutual Information-Based Image Template Matching with Small Template Size	310
<i>Hossein Soleimani, Mohammadali Khosravifard</i>	
NDVI Optimization Using Genetic Algorithm	315
<i>Peyman Kabiri, Mohammad H. Pandi, Siroos Kourki Nejat, Hamid Ghaderi</i>	
Object Tracking Using Improved CAMShift Algorithm Combined with Motion Segmentation	320
<i>Ebrahim Emami, Mahmood Fathy</i>	
Optimizing Cloud Detection Index for MODIS Imagery Using Genetic Algorithm	324
<i>Peyman Kabiri, Hamid Ghaderi, Siroos Kourki Nejat</i>	
Particle Filter-Based Object Tracking Using Adaptive Histogram	330
<i>M. Fotouhi, A. R. Gholami, S. Kasaei</i>	
Perspective Rectification and Skew Correction in Camera-Based Farsi Document Images	335
<i>Maryam Golpardaz, Hossein Nezamabadi-Pour</i>	
Real Time Multiple Object Tracking and Occlusion Reasoning Using Adaptive Kalman Filters	340
<i>Mohammad Azari, Ahmad Seyfi, Amir Hossein Rezaie</i>	
Recognition of Periodic Motions Using One-Dimensional Contour Based Features	345
<i>Meraj Ghaderian, Alireza Behrad, Samere Abbasi Dine Kaboodi</i>	
Relief-Based Feature Selection for Automatic Tumor Classification of Mammogram Images	350
<i>Abed Heshmati, Roya Amjadifard, Jamshid Shanbehzadeh</i>	
Robust and Real Time Object Tracking Using Regional Mutual Information in Surveillance and Reconnaissance Systems	355
<i>Mojtaba Asgarizadeh, Hossein Pourghassem, Ghazanfar Shahgholian, Hossein Soleimani</i>	
Robust Watermarking in Singular Values of Contourlet Coefficients	360
<i>Hoda Rezaee Kaviani, Nader Karimi, Shadrokh Samavi</i>	
Segmentation of Coronary Vessels by Combining the Detection of Centerlines and Active Contour Model	365
<i>Maryam Tagizadeh, Saeed Sadri, Ali Mohammad Doosthoseini</i>	
Semi Supervised Feature Extraction for Filling Semantic Gap in Image Retrieval	369
<i>Mahdi Jalali, Tohid Sedghi</i>	
Sport Video Classification Using an Ensemble Classifier	373
<i>Mohamad Hoseyn Sigari, Samaneh Abbasi Sureshjani, Hamid Soltanian-Zadeh</i>	
Static Persian Sign Language Recognition Using Kernel-Based Feature Extraction	377
<i>Milad Moghaddam, Manoochehr Nahvi, Reza Hassanzadeh Pak</i>	
Statistical Restoration to Resist Chi-Square Attack Based on Heuristic Algorithms in Steganalytic Systems	382
<i>M. Hamghalam, S. Mirzakuchaki</i>	
Steganalysis Using Cycle-Spinning Contourlet Transform Denoising for Cover Estimation	386
<i>Hassan Karimi, Mahrokh G. Shayesteh, Mohammad Ali Akhaee</i>	
Thinning Based Multipurpose Camouflage Pattern Design	391
<i>Arash Abdi Hejrandoost, Reza Safabakhsh</i>	
Tomato Picking Machine Vision Using with the Open CV's Library	396
<i>Mohammad Ali Kieh Badroudi Nezhad, Jafar Massh, Hossein Ebrahimipour Komleh</i>	
Ultrasound Medical Image Speckle Reduction Using Fourth-Order Partial Differential Equation	401
<i>Adib Keikhosravi, Seyyedhadi Hashemi-Berenjabad</i>	
Author Index	