

**PROCEEDINGS OF  
THE 2011 INTERNATIONAL CONFERENCE ON  
IMAGE PROCESSING, COMPUTER VISION, & PATTERN  
RECOGNITION**

# **IPCV 2011**

## **Volume II**

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# Foreword

It gives us great pleasure to introduce this collection of papers to be presented at the 2011 International Conference on Image Processing, Computer Vision, and Pattern Recognition (ICCV'11), July 18 through 21, 2011, at Monte Carlo Resort, Las Vegas, USA.

## **The Academic Co-Sponsors of this year's conference include:**

The Berkeley Initiative in Soft Computing (BISC), University of California, Berkeley, USA; Biomedical Cybernetics Laboratory, HST of Harvard University and Massachusetts Institute of Technology (MIT), USA; Intelligent Data Exploration and Analysis Laboratory, University of Texas at Austin, Austin, Texas, USA; Collaboratory for Advanced Computing and Simulations (CACs), University of Southern California, USA; Minnesota Supercomputing Institute, University of Minnesota, USA; Knowledge Management & Intelligent System Center (KMIS) of University of Siegen, Germany; UMIT, Institute of Bioinformatics and Translational Research, Austria; BioMedical Informatics & Bio-Imaging Laboratory, Georgia Institute of Technology and Emory University, Atlanta, Georgia, USA; Hawkeye Radiology Informatics, Department of Radiology, College of Medicine, University of Iowa, Iowa, USA; NDSU-CIIT Green Computing and Communications Laboratory, USA; Supercomputer Software Department (SSD), Institute of Computational Mathematics & Mathematical Geophysics, Russian Academy of Sciences, Russia; SECLAB (inter-university research groups at University of Naples Federico II, the University of Naples Parthenope, and Second University of Naples, Italy); Medical Image HPC & Informatics Lab (MiHi Lab), University of Iowa, Iowa, USA; Intelligent Cyberspace Engineering Lab., ICEL, Texas A&M University (Com./Texas), USA; and Model-Based Engineering Laboratory, University of North Dakota, North Dakota, USA.

## **Corporate Co-Sponsors, Co-Sponsors At-Large and Organizers include:**

A number of university faculty members and their staff (names appear below and also on the cover of the proceedings); Microsoft Research; Altera Corporation; Pico Computing; World Academy of Science ([www.world-academy-of-science.org/](http://www.world-academy-of-science.org/)); Computer Science Research, Education, and Applications Press; High Performance Computing for Nanotechnology (HPCNano); International Society of Intelligent Biological Medicine; World Academy of Biomedical Sciences and Technologies; The International Council on Medical and Care Compunetics; The UK Department for Business, Enterprise & Regulatory Reform, UK; Scientific Technologies Corporation; and HoIP - Health without Boundaries. In addition, several publishers of computer science and computer engineering books and journals, chapters and/or task forces of computer science associations/organizations from 8 countries, and developers of high-performance machines and systems provided significant help in organizing the conference as well as providing some resources.

An important mission of WORLDCOMP (a federated congress to which this conference is affiliated with) includes "Providing a unique platform for a diverse community of constituents composed of scholars, researchers, developers, educators, and practitioners. The Congress makes concerted effort to reach out to participants affiliated with diverse entities (such as: universities, institutions, corporations, government agencies, and research centers/labs) from all over the world. The congress also attempts to connect participants from institutions that have **teaching** as their main mission with those who are affiliated with institutions that have **research** as their main mission. The congress uses a quota system to achieve its institution and geography diversity objectives."

The program committee would like to thank all those who submitted papers for consideration. About 56% of the submissions were from outside the United States. Each paper was peer-reviewed by two experts in the field for originality, significance, clarity, impact, and soundness. In cases of contradictory recommendations, a member of the conference program committee was charged to make the final decision; often, this involved seeking help from additional referees by using a double-blinded review process. In addition, papers whose authors included a member of the conference program committee were evaluated using the double-blinded review process. The only exception to the above evaluation process was for papers that were submitted directly to chairs/organizers of approved sessions/workshops; in these cases, the chairs/organizers were responsible for the evaluation of such submissions. The overall paper acceptance rate for regular papers was 24%; 18% of the remaining papers were accepted as poster papers.

We are very grateful to the many colleagues who helped in organizing the conference. In particular, we would like to thank the members of the IPCV'11 Program Committee who we hope will offer their help again in organizing the next year's conference (IPCV'12). The IPCV'11 Program Committee members were:

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- *Dr. Songfeng (Andy) Zheng, Missouri State University, Springfield, Missouri, USA*

We express our gratitude to keynote and invited speakers of WORLDCOMP and individual conference/tracks and tutorial speakers - the list of speakers appears on the conference web site.

We would also like to thank the followings: UCMSS (Universal Conference Management Systems & Support, California, USA) for managing all aspects of the conference; Dr. Tim Field of APC for managing the printing of the proceedings; and the staff of Monte Carlo Resort in Las Vegas for the professional service they provided. Last but not least, we would like to thank the Co-editors and Associate Editors of IPCV'11: Drs. Leonidas Deligiannidis, Gerald Schaefer, Ashu M. G. Solo, and Sim Kok Swee.

We present the proceedings of IPCV'11.

Hamid R. Arabnia, Ph.D.  
 Professor, Computer Science, University of Georgia, USA  
**General Chair & Coordinator, IPCV'11**



# Contents

## **SESSION: RECOGNITION AND MATCHING METHODS + APPLICATIONS**

<b>Image Categorization using Codebooks Built from Scored and Selected Local Features</b>	<b>3</b>
<i>Bala Subrahmanyam Divakaruni, Jie Zhou</i>	
<b>Shape Matching Using Both Internal and External Morphological Shape Components</b>	<b>10</b>
<i>Jianning Xu</i>	
<b>Recognition of Soccer Players after Occlusions Using Temporal Color Signatures</b>	<b>16</b>
<i>Thomas Mueller, Daniel Manger, Juergen Metzler</i>	
<b>Modifications In Normalized Cross Correlation Expression For Template Matching Applications</b>	<b>22</b>
<i>Sonam Singh, Dinesh Ganotra</i>	
<b>A Generic Strategy for Designing an Efficient and Robust HMM-Based Action Recognizer</b>	<b>29</b>
<i>Michael Bensimhoun, Moty Golan, Lital Alon, Gil Sod-Moriah, Erez Berkovich</i>	
<b>Classifying Handwritten Digits on the Grassmann Manifold</b>	<b>36</b>
<i>Jen-Mei Chang, Jose Israel Pacheco</i>	
<b>Complex Human Activity Searching in a Video Employing Negative Space Analysis</b>	<b>42</b>
<i>Shah Atiqur Rahman, Siu-Yeung Cho, M.K.H. Leung</i>	
<b>Optimization Support Vector Machine with Genetic Algorithm and Incremental Methods of Feature Extraction</b>	<b>48</b>
<i>Mehdi Ghayoumi, Ghasem Ghayoumi</i>	
<b>A Robust Approach for Malayalam CV Speech Unit Recognition Using Artificial Neural Network</b>	<b>52</b>
<i>Thasleema T M, Narayanan N K, Sreekanth N S</i>	
<b>Partial Discharge Pattern Recognition Using Hilbert-Huang Transform in Acoustic Signal Analysis</b>	<b>57</b>
<i>Feng-Chang Gu, Hong-Chan Chang, Hung-Cheng Chen, Cheng-Chien Kuo, Chao-Hsiang Hsu</i>	
<b>Development of Pointing System that Uses Gaze Point Detection</b>	<b>62</b>
<i>Tomohiro Inoue, Yoichi Muraoka</i>	
<b>An Automated Real-time Image Georeferencing System</b>	<b>68</b>
<i>Supanee Tanathong, Impyeong Lee</i>	

<b>Affine Invariant Matching of Broken Boundaries based on Differential Evolution</b>	<b>75</b>
<i>Wuchao Situ, Peter Wai Ming Tsang</i>	
<b>Hand Gesture Recognition for Sign Language A New Hybrid Approach</b>	<b>80</b>
<i>J. Rekha, Jhilik Bhattacharya, Somjyoti Majumder</i>	
<b>Lip Reading: Japanese Vowel Recognition by Tracking Temporal Changes of Lip Shape</b>	<b>87</b>
<i>Koshi Odagiri, Yoichi Muraoka</i>	
<b>A Fuzzy Condition Sensitive Hierarchical Algorithm for Template Matching in Emotionally Expressive Facial Images</b>	<b>92</b>
<i>Rajshree Mandal, Anisha Halder, Amit Konar, Atulya K. Nagar</i>	
<b>A Generic Approach for Recognition and Structural Modelling of Drawers' Sketching Gestures</b>	<b>99</b>
<i>Ney Renau-Ferrer, Celine Remi</i>	
<b>A New Nonlinear Discriminant Analysis Algorithm using a Combined Version of LDA and LLE</b>	<b>106</b>
<i>Hala Hijazi, Oussama Bazzi, Andre Bigand</i>	
<b>Handwritten Arabic (Indian) Numerals Recognition using Fourier Descriptor and Structure Base Classifier</b>	<b>111</b>
<i>Ihab Mohammed, Shatha Noor, Loay George</i>	
<b>Automatic Facial Expression Recognition Using Neural Network</b>	<b>118</b>
<i>Behrang Yousef Asr Langeroodi, Kaveh Kia Kojouri</i>	
<b>Using Dynamic Time Warping for Persian Handwriting Recognition</b>	<b>123</b>
<i>Reza Ravani, Parham Nooralishahi</i>	
<b>A New Morphological Image Detection Algorithm</b>	<b>130</b>
<i>Mohammed Abuzalata, Naseem Abuzalata, Ziad Al-Qadi</i>	
<b>SESSION: WAVELETS + WATERMARKING + COMPRESSION TECHNOLOGIES</b>	
<b>Multi-Shape - Hierarchical Active Shape Models</b>	<b>137</b>
<i>Juan J. Cerrolaza, Arantxa Villanueva, Rafael Cabeza</i>	
<b>Adaptive Bilateral Filter for JPEG 2000 Deringing</b>	<b>144</b>
<i>Anatoly Nikitin, Vladimir Solovyev, Vladimir Khryashchev, Andrey Priorov</i>	



<b>Analysis of Super Resolution Reconstruction based on Multi-frame Interpolation using Different Ortho-normal Wavelets</b>	<b>150</b>
<i>Pallavi Bhole, Eun-Young Elaine Kang</i>	
<b>Behaviors Supervised by Human Consciousness Distribution model on Spectrum Range</b>	<b>157</b>
<i>Younggun Lee, Namik Cho</i>	
<b>Video Analysis Through Wavelet Coefficients and Correlation: An Application in the Financial Sector</b>	<b>164</b>
<i>Alejandro Kepes, Jackelyne Gomez</i>	
<b>Invisible and Robust Color Image Watermarking in Contourlet Domain for Image Authentication</b>	<b>168</b>
<i>Venkata Narasimhulu C, Satya Prasad K</i>	
<b>A Comparison of Transform Domain Effects on Robust Blind Watermark Method</b>	<b>175</b>
<i>Hui Gong, Shan Juan Xie, Ya Lin Wu, Sunil Chon, Sook Yoon, Dong Sun Park</i>	
<b>Compensation of White Point Shift Generated from Tone Compression in iCAM</b>	<b>181</b>
<i>Seok-Min Chae, Sung-Hak Lee, Hyuk-Ju Kwon, Tae-Wuk Bae, Kyu-Ik Sohng</i>	
<b>Time Series Similarity Based on Wavelet Transformation and Directional Line Element</b>	<b>185</b>
<i>Kai Tian, Liying Zheng</i>	
<b>Robust Image Watermarking Scheme Based on Wavelet Technique</b>	<b>188</b>
<i>Aree Ali Mohammed, Haval Mohammed Sidqi</i>	
<b>Contents Based Still-Image Protection Method Using Seam Carving Algorithm</b>	<b>194</b>
<i>Hyouckmin Yoo, Hui Gong, Sunil Chon, Dong Sun Park</i>	

**SESSION: IMAGING AND MEDICAL APPLICATIONS + BIOLOGICAL APPLICATIONS**

<b>A Structured Illumination Method for Microscope Stage Tracking</b>	<b>201</b>
<i>Brian Eastwood, Lamar Mair, Russell Taylor</i>	
<b>An Automatic Detection Method for Liver Lesions Using Abdominal Computed Tomography</b>	<b>208</b>
<i>Sheng-Fang Huang, Kuo-Hsien Chiang</i>	
<b>An Automatic Diagnostic System for Medically Disordered Voice</b>	<b>213</b>
<i>Mansour Alsulaiman, Ghulam Muhammad, Muhammad Alomari, Muhammad Alshehri, Zulfiqar Ali, Awais Mahmood</i>	
<b>Big-data Feature Screening Using Bregman Divergence</b>	<b>219</b>
<i>Jie Cheng, Qiang Cheng, Mehdi Zargham</i>	

<b>Breast Cancer Computer Aided Diagnosis (CAD) System</b>	<b>224</b>
<i>Hala Alshamlan, Ali El-Zaart</i>	
<b>A Fully Automatic Scheme for Medical Image Segmentation with Wavelet Based Image Fusion</b>	<b>230</b>
<i>Hima Bindu Chinni, Satya Prasad Kodati</i>	
<b>Reconstruction of Tomographic Medical Images Using Kalman Filter Approach</b>	<b>236</b>
<i>Shayan Goliaei, Seyed Ghorshi, Mohammad Mortazavi</i>	
<b>Functional Connectivity Mapping for Correlated Resting State Image Volumes</b>	<b>241</b>
<i>Bin Chen, Long Meng, Man Qiu</i>	
<b>Medical Image Denoising Using a Nonlinear Thresholding Function in Nonsampled Contourlet Transform</b>	<b>246</b>
<i>Md. Foisal Hossain, Mohammad Reza Alsharif, Katsumi Yamashita</i>	
<b>3D Reconstruction Of Human Retina From a Single Fundus Image</b>	<b>252</b>
<i>Jini Cheriyan, Hema P Menon, K. A . Narayanankutty</i>	
<b>A New Bone Reposition Detection Scheme for Periapical Lesion Treatment in Dentistry</b>	<b>258</b>
<i>Padma Vasavi Kalluru, Madhavi Latha Makkenna, Krishnarao V Ede, Udaya Kumar Nadakuduru</i>	
<b>Novel Classification of Current Methods, Available Softwares and Datasets in Medical Image Segmentation</b>	<b>264</b>
<i>Maryam Rastgarpour, Jamshid Shanbehzadeh</i>	
 <b>SESSION: STEREO AND IMAGING SCIENCE + 3D AND DEPTH COMPUTATION</b> 	
<b>A Local Iterative Refinement Method for Adaptive Support-Weight Stereo Matching</b>	<b>271</b>
<i>Eric Psota, Jędrzej Kowalczyk, Jay Carlson, Lance Perez</i>	
<b>Perceptual Quality Improvement of Stereoscopic Images</b>	<b>278</b>
<i>Jong In Gil, Manbae Kim</i>	
<b>Depth Map Adjustment for the Improvement of Stereoscopic Image Perception</b>	<b>283</b>
<i>Manbae Kim</i>	
<b>Automatic Segmentation of Pulmonary Artery (PA) Using Customized Level Set Method in 3D (CTA) Images</b>	<b>288</b>
<i>Yousef Ebrahimdoost, Salah D.Qanadli, Alireza Nikravanshalmani, Tim J. Ellis, Zahra Falah Shojaee, Jamshid Dehmeshki</i>	

**A Novel Heterogeneous Framework for Stereo Matching** 293

*Leonardo De-Maestru, Stefano Mattoccia, Arantxa Villanueva, Rafael Cabeza*

**SESSION: SECURITY APPLICATIONS AND RELATED ISSUES + INSPECTION SYSTEMS**

**Biometric Template Protection for Dynamic Time Warping-based User Authentication** 303

*Keerati Inthavisas, Daniel Lopresti*

**Attacks on Speech Biometric Authentication** 310

*Keerati Inthavisas, Daniel Lopresti*

**Rating Whole-Body Suspiciousness Factors in Automated Surveillance of a Public Area** 317

*Neil Rowe, Alex Chan*

**New Region Incrementing Visual Cryptography Scheme** 323

*Ching-Nung Yang, Hsiang-Wen Shih, Yu-Ying Chu, Lein Harn*

**Automated Industrial Inspection of Optical Lenses Using Computer Vision** 330

*Hong-Dar Lin, Wan-Ting Lin, Huan-Hua Tsai*

**Image Processing for Radiographic Films of Weld Inspection** 337

*Farrokh Faramarzi, Mohammadreza Motamedi*

**A Novel Biometric Personal Authentication Using Finger Behaviors Supervised by Human Consciousness** 344

*Shan Juan Xie, Hui Gong, Sunil Chon, Sook Yoon, Dong Sun Park*

**Categorizing Global and Local Features of On-line Signature Verification using DTW and Fuzzy Logic** 349

*Ghazaleh Taherzadeh, Roozbeh Karimi, Alireza Ghobadi, Payam Vahdani Amoli, Seyedali Mirjalili*

**SESSION: FACE RECOGNITION, DETECTION, AND TRACKING + RELATED ISSUES**

**Lip Localization Algorithm Using Gabor Filter** 357

*Robert Hursig, Xiaozheng Zhang, Chiweng Kam*

**Face Identification Based on Contrast Limited Adaptive Histogram Equalization (CLAHE)** 363

*Gibran Benitez-Garcia, Jesus Olivares-Mercado, Gualberto Aguilar-Torres, Gabriel Sanchez-Perez, Hector Perez-Meana*

<b>Robust Face Recognition Under the Polar Coordinate System</b>	<b>370</b>
<i>Jae Hyun Oh, Nojun Kwak</i>	
<b>Multiple Face Tracking with Appearance Modes and Reasoning</b>	<b>375</b>
<i>Prithwjit Guha, Mayank Jain, Nipun Pande, Tavleen Oberoi</i>	
<b>A Review of Methods for Face Verification under Illumination Variation</b>	<b>381</b>
<i>Mehran Emadi, Farhad Navabifar, Marzuki Khalid, Rubiyah Yusof</i>	
<b>A Short Review Paper on Face Detection Using Machine Learning</b>	<b>391</b>
<i>Farhad Navabifar, Mehran Emadi, Rubiyah Yusof, Marzuki Khalid</i>	
<b>Implementation of Face Detection System Using Haar Classifiers</b>	<b>399</b>
<i>Hayfa Blaiech, Fatma Elzahra Sayadi, Rached Tourki</i>	
<b>SESSION: VIDEO PROCESSING + MOTION ESTIMATION AND DETECTION + TRACKING TECHNOLOGIES AND METHODS</b>	
<b>Motion Artifacts Compensation in FDK Based 3D Cone-beam Tomography Using Correlation of X-ray Projections</b>	<b>407</b>
<i>Ujjal Kumar Bhowmik, Reza Adhami</i>	
<b>Hierarchical Object Detection and Tracking with an Implicit Shape Model</b>	<b>414</b>
<i>Kai Jungling, Stefan Becker, Michael Arens</i>	
<b>Automatic Detection for Tracking Moving Objects in H.264 Video Sequences Using Multi-Features and Bi-Modal Gaussian Approximation</b>	<b>421</b>
<i>Victor Mejia, Eun-Young Elaine Kang</i>	
<b>Improved 1-Bit Transform Based Motion Estimation Using Color Channels</b>	<b>427</b>
<i>Sarp Erturk</i>	
<b>Image Registration for Video Stabilization and Motion Detection</b>	<b>433</b>
<i>Brian Jackson, Ardeshir Goshtasby</i>	
<b>3D Tracking of Mouse Locomotion Using Shape-From-Silhouette Techniques</b>	<b>440</b>
<i>Po-Lun Lai, Michele Basso, Lesley Fisher, Alison Sheets</i>	
<b>Visual Tracking of Athletes in Volleyball Sport Videos</b>	<b>446</b>
<i>Hananeh Salehifar, Azam Bastanfard</i>	
<b>Adaptive Algorithm for Fast and Accurate Video Object Tracking using SIFT and BMA for Slow and Rapid Movements</b>	<b>452</b>
<i>Uzma Afsheen, M.Fahim Ul Haq, Tahir Malik</i>	

**SESSION: WORKSHOP ON SOFT COMPUTING IN IMAGE PROCESSING AND  
COMPUTER VISION, SCIPCV**

**Detection of the Optic Disc in Retinal Images by Means of Ant Colony Optimization  
Algorithm** 461

*Carla Pereira, Luis Goncalves, Manuel Ferreira*

**Fractal Dimension-Based Cortical Dysplasia Detection Using MR Images for Children with  
Epilepsy** 467

*Syoji Kobashi, Nobuyoshi Kawakami, Yuri Kitamura, Kuriko Shimono, Kei Kuramoto, Masako Taniike,  
Tomomoto Ishikawa, Yutaka Hata*

**Action Recognition by Imprecise Hidden Markov Models** 474

*Alessandro Antonucci, Rocco de Rosa, Alessandro Giusti*

**A Comparative Study of K-Means and Fuzzy C-Means for Color Reduction** 479

*Quan Wen, M. Emre Celebi, Gerald Schaefer*

**Face Recognition with One Sample Per Person Based on Contourlet and Nearest Feature  
Line** 484

*Lijun Yan, Jeng-Shyang Pan*

**2D-3D Matching of Fluoroscopy and MDCT Image During Manual Tests Based on  
Anatomical Knowledge** 488

*Kouki Nagamune, Yosuke Uozumi, Shinya Oka, Hiroshi Sasaki, Daisuke Araki, Seiji Kubo, Ryosuke  
Kuroda, Masahiro Kurosaka*

**SESSION: CLASSIFICATION + SEGMENTATION + REGISTRATION + EDGE  
DETECTION**

**An Approach towards Edge Detection and Watershed Segmentation Based on an  
Interval-Valued Morphological Gradient** 497

*Peter Sussner, Mike Nachtgael, Estevao Esmi*

**Finding the Best Edge Image** 504

*Ryan Beasley*

**A Stochastic Level Set Method for Subspace Mumford-Shah Based Image Segmentation** 511

*Yan Nei Law, Hwee Kuan Lee, Andy Yip*

**Fast Line And Object Segmentation In Noisy And Cluttered Environments Using Relative  
Connectivity** 517

*Michael Teutsch, Thomas Schamm*

<b>A Multi-Scale Particle Swarm Optimization (PSO) Approach to Image Registration</b>	<b>524</b>
<i>Yang Chen, Yuri Owechko, Swarup Medasani</i>	
<b>Facial Age Classification using Subpattern-based Approaches</b>	<b>531</b>
<i>Fatemeh Mirzaei, Onsen Toygar</i>	
<b>Novel Color LBP Descriptors for Scene and Image Texture Classification</b>	<b>537</b>
<i>Sugata Banerji, Abhishek Verma, Chengjun Liu</i>	
<b>Supervised Classification Of Texture Patterns With Nonnegative Matrix Factorization</b>	<b>544</b>
<i>Rafal Zdunek</i>	
<b>A Bayes Optimal Framework for Pattern Classification</b>	<b>551</b>
<i>Di You</i>	
<b>Supervised Object Segmentation Using Visual and Spatial Features</b>	<b>557</b>
<i>Michael Cormier, Iker Gondra</i>	
<b>Pedestrian and Vehicle Classification Surveillance System for Street-Crossing Safety</b>	<b>564</b>
<i>Daw-Tung Lin, Yu-Ting Chen</i>	
<b>Interactive Segmentation of Multiple Images</b>	<b>571</b>
<i>Yan Nei Law, Hwee Kuan Lee, Michael Ng, Andy Yip</i>	
<b>Fast Online Incremental Attribute-based Object Classification using Stochastic Gradient Descent and Self-Organizing Incremental Neural Network</b>	<b>576</b>
<i>Sirinart Tangruamsub, Aram Kawewong, Osamu Hasegawa</i>	
<b>Fast Moment Preservation for Image Thresholding Method Using a Mixture of Gamma Distributions</b>	<b>582</b>
<i>Ihsan Ullah, Ali El-Zaart, Hatim A. Aboalsamh</i>	
<b>Objects Description and Extraction by the Use of Straight Line Segments in Digital Images</b>	<b>588</b>
<i>Vladimir Volkov, Rudolf Germer, Alexandr Oneshko, Denis Oralov</i>	
<b>An Approach to Improving Image Classification Using Visual Attention Weight Order</b>	<b>595</b>
<i>Zhiyong Feng, Chao Xu, Yu Jia</i>	
<b>Evaluating Three Image Segmentation Algorithms from Two Perspectives: Segmentation Error Measures and Image Annotation</b>	<b>601</b>
<i>Gabriel Mihai, Liana Stanescu, Dumitru Dan Burdescu, Cosmin Stoica Spahiu</i>	

<b>Optimization of Unscented Kalman Filter Algorithm for 3-D Point Based Rigid Registration</b>	<b>608</b>
<i>Farnaz Zamani, Sina Asadallahi, Samuel Cheng, Pramode Verma, Ali Asghar Beheshti Shirazi</i>	
<b>Genetic Algorithm for Features Weighting and Automatic Parametrizing of the Classification Algorithm for Graphemes</b>	<b>614</b>
<i>Hani Daher, Djamel Gaceb, Veronique Eglin, Nicole Vincent, Stephane Bres</i>	
<b>Foreign Accent Classification for Arabic Speech Learning</b>	<b>621</b>
<i>Aymen Trigui, abdelkarim Mars, Ameer Ben Jannet, Mohsen Maraoui, Mounir Zrigui</i>	
<b>Texture Classification Approach Based on Combination of Edge and Co-occurrence and Local Binary Pattern</b>	<b>626</b>
<i>Shervan Fekri Ershad</i>	
<b>Fast Kernel Fisher Discriminant Analysis by Approximating Principle Component Analysis</b>	<b>630</b>
<i>Jinghua Wang, Qin Li, Jane You</i>	
<b>SESSION: NOVEL ALGORITHMS AND APPLICATIONS</b>	
<b>Automatic Clustering Using a Mahalanobis ART Neural Network and Density-based Removal Pre-processing</b>	<b>637</b>
<i>Trung H. Duong, Lawrence L. Hoberock</i>	
<b>Transformation of Self Affine Features due to Windowing Effects</b>	<b>644</b>
<i>Zoltan Prohaszka</i>	
<b>High-Resolution Radar/SAR Imaging: An Experiment Design Framework Combined with Variational Analysis Regularization</b>	<b>652</b>
<i>Yuriy Shkvarko, Bernardino Castillo, Jose Tuxpan, David Castro</i>	
<b>Applying Support Vector Regression to Predict Structure in Image Completion</b>	<b>659</b>
<i>Tzung-Shiuan Lai, Cho-Wei Shih, Hui-Chuan Chu, Yu-Min Chen, Chin-Bin Wang</i>	
<b>Ridge and Valley Junctions Extraction</b>	<b>666</b>
<i>Baptiste Magnier, Philippe Montesinos, Daniel Diep</i>	
<b>Feature-based Localization Refinement of Players in Soccer Using Plausibility Maps</b>	<b>672</b>
<i>Christian Herrmann, Daniel Manger, Juergen Metzler</i>	
<b>Application of Computer Vision for Lettuce Seeds Germination Detection</b>	<b>679</b>
<i>Chao Li, Amar Raheja, David Still</i>	
<b>A Portable Multi-sensor System for Geo-referenced Image Sequences</b>	<b>684</b>
<i>Jihun Lee, Kyoungah Choi, Impyeong Lee</i>	

<b>Multi-scale NWTN Filter for Small Target Detection in Infrared Images</b>	<b>690</b>
<i>Tae-Wuk Bae, Won-Hyung Choi, Byoung-Ik Kim, Young-Choon Kim, Sang-Ho Ahn</i>	
<b>Characterizing Video-based Activity using a 3D Structure Tensor</b>	<b>694</b>
<i>Guangchun Cheng, Wasana Santiteerakul, Yiwen Wan, Bill Buckles</i>	
<b>Integrating Bilateral Interpolation into Multi-frame Non-uniform Interpolation for Super Resolution</b>	<b>701</b>
<i>Prajakta Sawant, Eun-Young Elaine Kang, Paul Liu</i>	
<b>A Non Overlapping Camera Network: Calibration and Application Towards Lane Departure Warning</b>	<b>707</b>
<i>Amol Borkar, Monson Hayes, Mark Smith</i>	
<b>Vision Processing for Position Based Visual Servo Control of Spherical Objects</b>	<b>713</b>
<i>Michael Edmondson, Liqiong Tang</i>	
<b>Affine Wigner Moment Invariants</b>	<b>720</b>
<i>Albert Hoang</i>	
<b>DeWaLoP - Robust Pipe Joint Detection</b>	<b>727</b>
<i>Luis Mateos, Markus Vincze</i>	
<b>On the Improvement of Volterra Equation Based Filtering for Image Denoising</b>	<b>733</b>
<i>Eduardo Cuesta, Mokhtar Kirane, Salman Amin Malik</i>	
<b>Quantification and Relative Comparison of Synthesized Texture</b>	<b>739</b>
<i>Frank.Y Shih, Chandralekha De</i>	
<b>An Effective Integer Demosaicing Based on Directional Filtering</b>	<b>747</b>
<i>Chung-Yen Su, Ming-Kai Chang</i>	
<b>Using RLS Adaptive Algorithm for Packet Loss Replacement in VOIP</b>	<b>753</b>
<i>Seyed Reza Miralavi, Seyed Ghorshi, Mohammad Mortazavi</i>	
<b>Detection of Signal Transitions by Order Statistics Filtering</b>	<b>757</b>
<i>Ahmed Raji</i>	
<b>A Partially Occluded Sea-Sky Line Detection Algorithm</b>	<b>762</b>
<i>Ji-Hwan Park, Ki-Gon Nam, Jae-Heum Joo</i>	
<b>Training a New Cotton Imaging System via a Transfer Learning Approach</b>	<b>767</b>
<i>Muneem Shahriar, Ian Scott-Fleming, Hamed Sari-Sarraf, Eric Hequet</i>	



<b>An Occupant Sensing System Using Sensor Fusion for Smart Airbag</b>	<b>776</b>
<i>Byoung-Ik Kim, Tae-Wuk Bae, Won-Hyung Choi, Young-Choon Kim, Sang-Ho Ahn, Duk-Gyoo Kim</i>	
<b>Image Generation and Analysis for the Android Platform: Exploring Computer Vision in Mobile Development Environments</b>	<b>780</b>
<i>John McCarthy, Eman El-Sheikh</i>	
<b>Compensation of De-saturation Effect in HDR Images Based on Real Scene Adaptation Analysis</b>	<b>786</b>
<i>Hyuk-Ju Kwon, Sung-Hak Lee, Tae-Wuk Bae, Seok-Min Chae, Min-Ho Park, Kyu-Ik Sohng</i>	
<b>An Approach for Road Extraction from High Resolution Imagery Based on Radon-Like Features and Mathematical Morphology</b>	<b>791</b>
<i>S. Natarajan, P. N. Anil</i>	
<b>Fast HVS-Based Mode Decision for H.264/AVC Using Just-Noticeable-Difference</b>	<b>798</b>
<i>Mian-Shiuan Li, Mei-Juan Chen</i>	
<b>Using LSA and Association Rules to Enhance Web Image Annotation</b>	<b>805</b>
<i>Chuen-Min Huang, Yu-Syun Lee, Chung-Yu Lin, Chong-Yee Chen</i>	
<b>Research on Circular Target Center Detection Algorithm Based on Morphological Algorithm and Subpixel Method</b>	<b>812</b>
<i>Lei Yu, Huizhu Ma, Weizhou Yang</i>	
<b>Head Pose Detection Using Fast Robust PCA for Side Active Appearance Models Under Occlusion</b>	<b>817</b>
<i>Anil Yuce, Matteo Sorci, Jean-Philippe Thiran</i>	
<b>Automatic Image Annotation by Incorporating Weighting Strategy with CSOM Classifier</b>	<b>823</b>
<i>Chuen-Min Huang, Ching-Che Chang, Chun-Ting Chen</i>	
<b>Panoramic Background Generation Using Mean-Shift in Moving Camera Environment</b>	<b>829</b>
<i>Sang-Hyun Cho, Hang-Bong Kang</i>	
<b>Perfect Window Memoization: A Theoretical Model of an Optimization Technique for Image Processing Algorithms</b>	<b>836</b>
<i>Farzad Khalvati, Hamid R. Tizhoosh</i>	
<b>A Complete View Depended Volleyball Video Dataset Under the Uncontrolled Conditions</b>	<b>843</b>
<i>Hananeh Salehifar, Azam Bastanfard</i>	

<b>Compensation of the Readout Data for FLIR Photon 320 Infrared Camera</b>	<b>850</b>
<i>Cesar San martin, Rodolfo Andrade, Carlos Torres, Rodrigo Soto</i>	
<b>Blind Identification of Image Copy-paste Tampering Based on Logarithm Polar Coordinate Transformation</b>	<b>853</b>
<i>Ying-Da Lv, Xuan-Jing Shen, Hai-Peng Chen</i>	
<b>Evaluation of Fast K-Nearest Neighbors Search Methods Using Real Data Sets</b>	<b>860</b>
<i>Yi-Ching Liaw</i>	
<b>A Novel Nonlocal Means Denoising Method Using the DCT</b>	<b>865</b>
<i>Jinrong Hu, Yifei Pu, Yi Zhang, Yan Liu, Jiliu Zhou</i>	
<b>ConGrap - Contour Detection based on Gradient Map of Images</b>	<b>870</b>
<i>Frank Nagl, Konrad Kolzer, Paul Grimm, Tobias Bindel, Stephan Rothe</i>	
<b>Prospect of the Exchange Rate And Curve Fitting</b>	<b>876</b>
<i>Yusuke Kosugi, Yoichi Muraoka</i>	
<b>Suppressing the Cross Terms of the Wigner Distribution with an Adaptive Frequency Smoothing Window</b>	<b>881</b>
<i>Liyang Zheng, Daming Shi</i>	
 <b>SESSION: NOVEL ALGORITHMS AND APPLICATIONS + MEDICAL IMAGING</b> 	
<b>Image and Video Noise Reduction by Means of Sparse Representations in Highly Redundant Systems</b>	<b>887</b>
<i>Alexander Petukhov, Inna Kozlov</i>	
<b>An Algorithm for Eye Detection and Tracking in Face Images</b>	<b>893</b>
<i>Mohammad Ali Azimi Kashani, Mahdi Mollaei Arani, Mohammad Reza Ramezanpour Fini</i>	
<b>Processing by SVM of Haar Wavelet Transforms for Discontinuity Detection</b>	<b>898</b>
<i>John Mashford, Mike Rahilly, Donovan Marney</i>	
<b>Enhancement Technique for Aerial Images</b>	<b>904</b>
<i>Sertan Erkanli, Ahmet Gungor Pakfiliz, Jiang Li</i>	
<b>Deconvolution of Poisson Images in Bayesian Domain Using Fuzzy Median Filter</b>	<b>911</b>
<i>Chandra Mohan S, Rajan K, Srinivasan R</i>	
<b>Discriminant Analysis of Haar Features for Accurate Eye Detection</b>	<b>917</b>
<i>Shuo Chen, Chengjun Liu</i>	

<b>Development of AniDB and AniXML Schema for Semi-Autonomous Animation Contents Generation using Korean Fairy Tale Text</b>	<b>924</b>
<i>Young-One Cho, Byung-Chul So, Jin-Woo Jung</i>	
<b>A System to Transcribe Documents in European Languages with Human Help</b>	<b>930</b>
<i>Ravishankar Chityala, Sridevi Pudipeddi</i>	
<b>Modelling Imprints of Pharmaceutical Tablets for Imprint Quality Visual Inspection</b>	<b>934</b>
<i>Miha Mozina, Dejan Tomazevic, Franjo Pernus, Bostjan Likar</i>	
<b>Bag-Of-Visual-Words Approach based on SURF Features to Polyp Detection in Wireless Capsule Endoscopy Videos</b>	<b>941</b>
<i>Sae Hwang</i>	
<b>Comparative Evaluation of Mixed Algorithms For Color Image Segmentation</b>	<b>945</b>
<i>Andreea Iancu, Bogdan Popescu, Dumitru Dan Burdescu, Marius Brezovan, Eugen Ganea</i>	
<b>An Adaptive Data Hiding Method Using Neighborhood Pixels Differencing Based on Modulus Function</b>	<b>952</b>
<i>Najme Maleki, Mehrdad Jalali, Majid Vafaei Jahan</i>	
<b>Iterated Rician Denoising</b>	<b>959</b>
<i>Adrian Martin, Juan Francisco Garamendi, Emanuele Schiavi</i>	
<b>Data Hiding Method in Color Image Based on Grouping Palette Index by Particle Swarm Optimization with K-means Clustering</b>	<b>964</b>
<i>Chyuan-Huei Yang, Wen-Feng Wu</i>	
<b>Feature Selection and Facial Recognition with Sparse Multiclass Classification</b>	<b>970</b>
<i>Zhenqiu Liu, Amy Liu</i>	
<b>Automatic Video Classification Using Holistic Spatial Features and Optical Flow</b>	<b>973</b>
<i>Yuheng Wang, Roger Gaborski</i>	
<b>Brain Tumor Segmentation for MR Images using Clustering</b>	<b>977</b>
<i>Bo Ram Kim, Wook Hyun Kim</i>	
<b>A Practical Solution to Checker Pattern Detection based on Contour Validation</b>	<b>983</b>
<i>Athi Narayanan, Kamal Bijlani</i>	
<b>Box Flame Detection and Image Normalization in Comic Images</b>	<b>988</b>
<i>DongKeun Kim</i>	

<b>Face Detection and Tracking in Real Time Sequence of Images Independent of Environment Illumination</b>	<b>992</b>
<i>Mohammad Amin Assari, Alireza Amirshahi, Ali Eslami Bidgoli</i>	
<b>Curvelet Based Multi-Focus Medical Image Fusion Technique: Comparative Study With Wavelet Based Approach</b>	<b>997</b>
<i>Sandeep Kumar, Yash Kumar Sharma, Mahua Bhattacharya</i>	
<b>Boundary Fitting in the Construction of 3D Leaf Model</b>	<b>1004</b>
<i>Yi Wei, Sanli Wei</i>	
<b>Multi-Thresholding Image Segmentation Using Genetic Algorithm</b>	<b>1009</b>
<i>Omar Banimelhem, Yahya Ahmed Yahya</i>	
<b>A Effective Rate Control Initialization Method for H.264 According to Image Quality Balance of Gop</b>	<b>1015</b>
<i>Ya Lin Wu, CheolJin Choi, Dong Sun Park</i>	
<b>Hyperpectral Images: Compression, Visualization and Band Ordering</b>	<b>1023</b>
<i>Bruno Carpentieri</i>	
<b>CT Image Enhancement by Colorization for Brain Infarct Detection</b>	<b>1030</b>
<i>Tiong Lang Tan, Kok Swee Sim, Chin Kang Tan, Aun Kee Chong</i>	
<b>Real Time Based Computer-Aided Design MRI Breast Cancer Detection and Data Management System</b>	<b>1035</b>
<i>Kok Swee Sim, Fu Keong Chia, Sze Siang Chong, Chih Ping Tso, Siti Fathimah Abbas</i>	
<b>Video Segmentation: A Critical Survey</b>	<b>1040</b>
<i>Mangal Banwaskar, Archana Rajurkar</i>	
<b>Generic Visual Recognition on Non-Uniform Distributions Based on AdaBoost Codebooks</b>	<b>1046</b>
<i>Mohammad Mahdi Dehshibi, Seyed Meysam Alavi</i>	
<b>Particle Method for Sub-Voxel Extraction of Cerebral Surface in Neonatal MR Images</b>	<b>1052</b>
<i>Daisuke Yokomichi, Syoji Kobashi, Yuki Wakata, Kumiko Ando, Reiichi Ishikura, Kei Kuramoto, Tomomoto Ishikawa, Shozo Hirota, Yutaka Hata</i>	
<b>Removal of Blocking Distortions Using Subband Transforms in Moving Picture Coding</b>	<b>1058</b>
<i>Nasharuddin Zainal, Yukihiko Yamashita</i>	
<b>Automated Speech Recognition System (ASR)</b>	<b>1063</b>
<i>Mohamed Belgacem, Georges Antonoadis, Mounir Zrigui</i>	

<b>Islamic Star Pattern Images Recognition by Central Moment Invariants</b>	<b>1070</b>
<i>Maryam Ahadian, Azam Bastanfard</i>	
<b>Automated Building Change Detection using Multi-level Filter in High Resolution Images</b>	<b>1075</b>
<i>Zhen Liu</i>	
<b>A Multi Resolution Decomposition for a Passive Steganalysis Based on a Multi Agent System</b>	<b>1082</b>
<i>Imen Bouguerne, Hayet Farida Merouani, Nouha Kobsi</i>	
<b>Analysis of the Problems Faced by Poor Rural Students Studying in Chennai City Colleges Using FCM Models</b>	<b>1085</b>
<i>Amal Kulandaisamy, Lillies Thivagar</i>	
<b>Automated Rust Defect Recognition Method Based on Color and Texture Feature</b>	<b>1092</b>
<i>Luh-Maan Chang, Heng-Kuang Shen, Po-Han Chen</i>	
<b>Full High Definition to 3K Low Cost Video Upscaling Grounded by Lipschitz Optimization</b>	<b>1100</b>
<i>Krzysztof Malczewski</i>	
<b>High Resolution Respiratory Motion Artefacts Free Image Reconstruction Algorithm in PET</b>	<b>1103</b>
<i>Krzysztof Malczewski</i>	

