

2010 Sixth International Conference on Intelligent Information Hiding and Multimedia Signal Processing

(IIH-MSP 2010)

**Darmstadt, Germany
15 – 17 October 2010**



**IEEE Catalog Number: CFP10IIH-PRT
ISBN: 978-1-4244-8378-5**

2010 Sixth International Conference on Intelligent Information Hiding and Multimedia Signal Processing

IIHMSP 2010

Table of Contents

Preface.....	xviii
Organizing Committee.....	xix
Reviewers.....	xxv

Intelligent Watermarking Techniques, Image Authentication and Visual Cryptography

Possible Disease-Link Genetic Pathways Constructed by Hierarchical Clustering and Conditional Probabilities of Ovarian Carcinoma Microarray Data	1
<i>Hsiao-Han Ko, Kuo-Jin Tseng, Li-Min Wei, and Meng-Hsiun Tsai</i>	
An Efficient Source Authentication for Multicast Based on Merkle Hash Tree	5
<i>luon-Chang Lin and Chia-Chang Sung</i>	
An Improved Digital Signature Scheme with Fault Tolerance in RSA	9
<i>luon-Chang Lin and Hsing-Lei Wang</i>	
Chaos-Based Image Integrity Authentication Code	13
<i>Tzung-Her Chen, Wei-Lun Huang, and Chih-Yang Lin</i>	
The Information Hiding Technology Based on the Similar Sample Blocks of Grayscale Image	17
<i>Tzu-Chuen Lu, Siang-Ru Liao, and Chun-Ming Chang</i>	
A Robust Public Watermarking Scheme Based on DWT	21
<i>Chin-Chen Chang, Kuo-Nan Chen, and Ming-Huang Hsieh</i>	
Enhancement of Two-Factor User Authentication in Wireless Sensor Networks	27
<i>Hui-Feng Huang, Ya-Fen Chang, and Chun-Hung Liu</i>	
A Data Hiding Scheme on Word Documents Using Multiple-Base Notation System	31
<i>luon-Chang Lin and Ping-Kun Hsu</i>	

A Reversible Data Hiding Scheme for Digital Images Using LAU-Side Match Prediction	34
<i>Chin-Fang Lee and Huei-Ju Tsai</i>	

Steganography and Watermarking

Reversible Watermarking by Coefficient Adjustment Method	39
<i>Ching-Yu Yang, Chih-Hung Lin, and Wu-Chih Hu</i>	
A (2, 3) Threshold Secret Sharing Scheme Using Sudoku	43
<i>Yung-Chen Chou, Chih-Hung Lin, Pao-Ching Li, and Yu-Chiang Li</i>	
Reversible Authentication and Cross-Recovery of Images Using (t, n) Threshold and Modified-RCM Watermarking	47
<i>Yeh-Shun Chen and Ran-Zan Wang</i>	
Steganalysis Scheme Using the Difference Image of Calibrated Sub-sampling	51
<i>Jeong-Chun Joo, Tae-Woo Oh, Jung-Ho Choi, and Heung-Kyu Lee</i>	
Improved Watermark Estimation Scheme Based on Neighborhood Filter	55
<i>Tae-Woo Oh, Seung-Jin Ryu, Ji-Won Lee, Won-Young Yoo, and Heung-Kyu Lee</i>	
Multi-layer Secret Image Sharing	59
<i>Wen-Pinn Fang</i>	
Graylevel Images Encrypting Based on the n-Graylevel Encoding Method and the Lowest Common Multiple Technique	62
<i>Kuang Tsan Lin</i>	
Data Hiding Based on Side Match Vector Quantization and Modulus Function	66
<i>Lee Shu-Teng Chen, Wen-Tarn Chang, Suiang-Shyan Lee, and Ja-Chen Lin</i>	
High-Payload Image Hiding Scheme Using k-Way Block Matching	70
<i>Shang-Kuan Chen and Ran-Zan Wang</i>	
High Embedding Reversible Data Hiding Scheme for JPEG	74
<i>Wen-Chung Kuo, Shao-Hung Kuo, and Lih-Chyau Wu</i>	
Secure Hybrid Spread Spectrum System for Steganography in Auditive Media	78
<i>Marcus Nutzinger, Christian Fabian, and Marion Marschalek</i>	
Robust Watermarking of H.264-Encoded Video: Extension to SVC	82
<i>Peter Meerwald and Andreas Uhl</i>	
A Robust Digital Image Watermarking Algorithm Based on CHIRPLET Transform	86
<i>Minghui Deng and Xiuli Zhou</i>	
An Information-Theoretic Model for Dispersed Ordered Dithered Halftone Image Watermarking by Hilbert Curve Decomposition	90
<i>Brian K. Lien</i>	
Mobile Services and Implementation of Digital Watermarks in Audio Files	94
<i>Manabu Hirakawa and Junichi Iijima</i>	
A Watermarking Based Tamper Detection Solution for RFID Tags	98
<i>Ali Nur Mohammad Noman, Kevin Curran, and Tom Lunney</i>	
A Novel Image Watermarking Technique Using Fuzzy-BP Network	102
<i>Charu Agarwal and Anurag Mishra</i>	

Differential Histogram Modification-Based Reversible Watermarking with Predicted Error Compensation	106
<i>Dong-Gyu Yeo, Hae-Yeoun Lee, and Byeong Man Kim</i>	
A Visually Enhanced Approach to Watermarking 3D Models	110
<i>Shinichi Nakazawa, Sho Kasahara, and Shigeo Takahashi</i>	
Robustness Evaluation of Digital Watermarking Based on Discrete Wavelet Transform	114
<i>Kiyoharu Okagaki, Kenichi Takahashi, and Hiroaki Ueda</i>	
Impulsive Synchronization for Coupled Reaction-Diffusion System and Its Application in Information Hiding	118
<i>Wanli Yang, Suwen Zheng, and Li Huang</i>	
Digital Image Watermarking in DCT Domain Using Finite Newton Support Vector Regression	123
<i>Rajesh Mehta, Anurag Mishra, Rampal Singh, and Navin Rajpal</i>	
Fast Watermarking Based on QR Decomposition in Wavelet Domain	127
<i>Yashar Naderahmadian and Saied Hosseini-Khayat</i>	
Intelligent Watermarking with Multi-objective Population Based Incremental Learning	131
<i>Bassem S. Rabil, Robert Sabourin, and Eric Granger</i>	
Self-Synchronous Time-Domain Audio Watermarking Based on Coded-Watermarks	135
<i>Raúl Martínez-Noriega, Mariko Nakano, and Kazuhiko Yamaguchi</i>	
Intelligent Watermarking of Document Images as a Dynamic Optimization Problem	139
<i>Eduardo Vellasques, Robert Sabourin, and Eric Granger</i>	
A Novel Audio Watermarking Algorithm Based on Reduced Singular Value Decomposition	143
<i>Jian Wang, Ron Healy, and Joe Timoney</i>	

Cross-Discipline Techniques in Signal Processing and Networking

Design of 3-D FIR Cone-Shaped Filters by a Nest of McClellan Transformations	147
<i>Jong-Jy Shyu, Soo-Chang Pei, and Yun-Da Huang</i>	
Reversible Data Hiding with Improved Histogram Alteration Method	151
<i>Hsiang-Cheh Huang, Yueh-Hong Chen, and I-Hung Wang</i>	
A RFID-Based Hybrid Building Fire Evacuation System on Mobile Phone	155
<i>Liou Chu</i>	
A New Integrated Mobile Architecture for Heterogeneous Wireless Networks	159
<i>Shih-Jung Wu</i>	
Preliminary Survey of Multiview Synthesis Technology	163
<i>Ellen Sharma Shijagurumayum and Feng-Cheng Chang</i>	

Systematic Review of Applying Service Oriented Architecture in Networking	167
<i>Duen-Kai Chen</i>	
Adjacent Quad Modification Algorithm for Reversible Data Hiding	171
<i>Hsiang-Cheh Huang, Ting-Wei Chen, and Feng-Cheng Chang</i>	
Electrical Network Frequency as a Tool for Audio Concealment Process	175
<i>Feng-Cheng Chang and Hsiang-Cheh Huang</i>	
New Hidden and Secure Data Transmission Method Proposal for Military IEEE 802.11 Networks	179
<i>Piotrowski Zbigniew, Sawicki Krzysztof, Bednarczyk Mariusz, and Gajewski Piotr</i>	
Compression of 3D Triangle Meshes with a Generalized Parallelogram Prediction Scheme Based on Vector Quantization	184
<i>Zhongbao Chen, Fuliang Bao, Zhigang Fang, and Zhen Li</i>	
Single Band Statistics and Steganalysis Performance	188
<i>Pham Hai Dang Le and Matthias O. Franz</i>	
A Fine Grained RBAC Model Supporting Flexible Administrative Separation of Duty	192
<i>Yongzhong He, Zhan Han, and Ying Cai</i>	
NLOS Mitigation Method for TDOA Measurement	196
<i>Hao Jiang, Jie Xu, and Zhen Li</i>	
A New SETUP for Factoring Based Algorithms	200
<i>Constantinos Patsakis and Nikolaos Alexandris</i>	
A Fast Modular Multiplication Method	204
<i>Ali Sentürk and Mustafa Gök</i>	
Chaotic Iterations versus Spread-Spectrum: Chaos and Stego Security	208
<i>Christophe GUYEUX, Nicolas Friot, and Jacques M. Bahi</i>	
Controlled Distortion for High Capacity Data-in-Speech Spectrum Steganography	212
<i>Fatiha Djebbar, Habib Hamam, Karim Abed-Meraim, and Driss Guerchi</i>	
A Fast 8*8 2D IDCT Architecture, Avoiding Zero Transformed Coefficients	216
<i>Thomas Tziortzios and Stavros Dokouzyannis</i>	

Advanced Topics for Biometrics and Video Surveillance

A Framework for Face Recognition Using Laplacian Eigenmaps and Nearest Feature Mixtures	220
<i>Chen-Ta Hsieh, Chang-Hsing Lee, Chin-Chuan Han, and Ching-Chien Chuang</i>	
Facial Feature Alignment by Manifold Learning of Active Appearance Model	224
<i>Yuan-Kai Wang and Wei-Ren Chen</i>	
Improvement of Face Recognition by Eyeglass Removal	228
<i>Yuan-Kai Wang, Jia-Hau Jang, Luo-Wei Tsai, and Kuo-Chin Fan</i>	
Fast Forgery Detection with the Intrinsic Resampling Properties	232
<i>Cheng-Chang Lien, Cheng-Lun Shih, and Chih-Hsun Chou</i>	
Moving Object Detection for Night Surveillance	236
<i>Yuan-Kai Wnag and Ching-Tang Fan</i>	

Implementation of a Smart Traffic Prediction and Flow Control Mechanism for Video Streaming	240
<i>Yue-Ru Chuang, Chia-Sheng Hsu, and Je-Wei Chen</i>	
A Recovery Algorithm for the Details of the Low Resolution Video Sequence	244
<i>Jin Jing and Yuan Jie</i>	

Ubiquitous Multimedia Services and Applications for Residential Users

An Alternative-Path Approach to Improve Robustness of TCP Connections in Wireless Mesh Networks	248
<i>Yi-Ting Chien, Mong-Fong Horng, Yu-Cheng Sheu, Jeng-Pong Hsu, Yau-Hwang Kuo, and Chin-Shiun Shieh</i>	
A Fast and Efficient FEC Enhancement Scheme for Delay-Sensitive Video Transmissions	252
<i>Chun-I Kuo, Chi-Huang Shih, Ce-Kuen Shieh, and Wen-Shyang Hwang</i>	
Adaptive Forward Error Correction Combined with Packet Size Control for Wireless Video	256
<i>Chi-Huang Shih</i>	
Improving the Multimedia Processing of Relay Nodes in Mesh Wireless Networks	260
<i>Chun-Ting Huang</i>	
Frame Interpolation Method Based on Adaptive Threshold and Adjacent Pixels	264
<i>Hyeongchul Oh, Joohyun Lee, Changki Min, and Jechang Jeong</i>	
Low-Complexity DC-Compensated Weighted 2BT-Based Motion Estimation	268
<i>Changryoul Choi and Jechang Jeong</i>	
Autoregressive Video Modeling through 2D Wavelet Statistics	272
<i>M. Omidyeganeh, S. Ghaemmaghami, and S. Shirmohammadi</i>	

Circuits and Embedded Systems for Multimedia Signal Processing

Low-Cost and Shared Architecture Design of Recursive DFT/IDFT/IMDCT Algorithms for Digital Radio Mondiale System	276
<i>Shin-Chi Lai, Sheau-Fang Lei, and Ching-Hsing Luo</i>	
Lossless Coding of Multiband Images Using Interband Data Correlation and Error Feedback Prediction Scheme	280
<i>Cheng-Chen Lin, Yin-Tsung Hwang, Yi-Chen Chang, Jiun-Jiang Chen, and Ming-Wei Liu</i>	
Area-Efficient H.264 VLC Decoder Using Sub-tree Classification	284
<i>Chia-Cheng Lo, Chia-Wei Hsu, and Ming-Der Shieh</i>	
The Use of k-Means Algorithm to Compute the Line Spectrum Pair Frequencies with Tschirnhaus Transform	288
<i>Shi-Huang Chen and Ming-Lung Hsu</i>	

Efficient Multi-Layer Background Model on Complex Environment for Foreground Object Detection	292
<i>Wen-kai Tsai, Ming-hwa Sheu, and Chung-chi Lin</i>	
A Pipelined Program Decompression Engine Generator Based on Partial Field-Partitioned (PFP) Compression Technique for Embedded Systems	296
<i>Yuan-Long Jeang and Ko-Yen Hu</i>	
A Simple and Efficient Anti-collision Algorithm for RFID System	300
<i>Chuen-Ching Wang, Te-Yuan Wang, Tien-Hao Lien, and Rong-Ming Su</i>	

New Biometric Modalities and Capture Devices

Unobtrusive User-Authentication on Mobile Phones Using Biometric Gait Recognition	306
<i>Mohammad Omar Derawi, Claudia Nickel, Patrick Bours, and Christoph Busch</i>	
Improved Cycle Detection for Accelerometer Based Gait Authentication	312
<i>Mohammad O. Derawi, Patrick Bours, and Kjetil Holien</i>	
Capturing Hand or Wrist Vein Images for Biometric Authentication Using Low-Cost Devices	318
<i>J. Enrique Suarez Pascual, Jaime Uriarte-Antonio, Raul Sanchez-Reillo, and Michael G. Lorenz</i>	
Teeth Segmentation and Feature Extraction for Odontological Biometrics	323
<i>Danish Mairaj, Stephen D. Wolthusen, and Christoph Busch</i>	
3D Face Recognition with Local Binary Patterns	329
<i>Xuebing Zhou, Silvia Araujo Sánchez, and Arjan Kuijper</i>	
Usability Evaluation of Fingerprint Based Access Control Systems	333
<i>B. Fernandez-Saavedra, R. Alonso-Moreno, A. Mendaza-Ormaza, and R. Sanchez-Reillo</i>	

Privacy and Security in Biometrics

Blackbox Security of Biometrics (Invited Paper)	337
<i>Julien Bringer, Hervé Chabanne, and Koen Simoens</i>	
Spectral Minutiae Representations for Fingerprint Recognition	341
<i>Haiyun Xu and Raymond N.J. Veldhuis</i>	
A Survey of the Security and Privacy Measures for Anonymous Biometric Authentication Systems	346
<i>Ileana Buhan, Emile Kelkboom, and Koen Simoens</i>	
Privacy Preserving Identification: Order Statistics List Decoding Perspective	352
<i>Farzad Farhadzadeh, Sviatoslav Voloshynovskiy, and Oleksiy Koval</i>	
Fusion in Fingerprint Authentication: Two Finger Scenarios	356
<i>Davronzhon Gafurov, Christoph Busch, Patrick Bours, and Bian Yang</i>	
Acceleration Axis Selection in Biometric Technique Based on Gesture Recognition	360
<i>J. Guerra Casanova, C. Sánchez Ávila, A. de Santos Sierra, G. Bailador del Pozo, and V. Jara Vera</i>	

Two Stress Detection Schemes Based on Physiological Signals for Real-Time Applications	364
<i>Alberto de Santos Sierra, Carmen Sánchez Ávila, Javier Guerra Casanova, Gonzalo Bailador del Pozo, and Vicente Jara Vera</i>	
Teaching of Emotional Expression Using Finger Braille	368
<i>Yasuhiro Matsuda and Tsuneshi Isomura</i>	
Detecting Sustained Attention during Cognitive Work Using Heart Rate Variability	372
<i>Cho-Yan Chen, Chi-Jen Wang, E-Liang Chen, Chi-Keng Wu, Yen Kuang Yang, Jeen-Shing Wang, and Pau-Choo Chung</i>	
Gabor-Based Kernel Independent Component Analysis for Face Recognition	376
<i>Yanchuan Huang, Mingchu Li, Chuang Lin, and Linlin Tian</i>	
Bayesian Decision Based Method for Assets Recognition of Risk Assessment	380
<i>Shenyu Liu, Xi He, and Daofu Gong</i>	
Bio-inspired Hybrid Face Recognition System for Small Sample Size and Large Dataset	384
<i>Muhammad Imran Razzak, Muhammad Khurram Khan, and Khaled Alghathbar</i>	
Driving Conditions Recognition Using Heart Rate Variability Indexes	389
<i>Jeen-Shin Wang, Pau-Choo Chung, Wei-Hsin Wang, and Che-Wei Lin</i>	
Facial Features Approximation for Expression Detection in Human-Robot Interface	393
<i>Mohammad Ibrahim Khan and Md. Al-Amin Bhuiyan</i>	

Multimedia Contents Analysis and Applications

Research on Multimedia Intelligence Course and Intelligence Classroom Based on Multiple Intelligence Theory	398
<i>Qingsheng Li, Aimin Wang, Jinyu Kai, and Jipeng Wang</i>	
Design and Implementation of Personalized and Visual Web Page Editor	402
<i>Qingsheng Li, Jipeng Wang, and Xiaona Jiang</i>	
Genetic Algorithm Based Bayesian Network for Customers' Behavior Analysis	406
<i>Xiao Yi Yu and Aiming Wang</i>	
Revisit LSB Matching	410
<i>Xiao Yi Yu and Aiming Wang</i>	

Internet Multimedia Technology and Applications

An Object-Based Web System for Building a Virtual Community	414
<i>S.R. Tsai, Y.S. Huang, U.L. Dai, G.H. Huang, C.M. Lee, J.Y. Fang, Y.T. Chen, and J.N. Lee</i>	
A Snapshot-Based Evaluation Method for Garbage Collection	418
<i>Chin-Yang Lin, Ting-Wei Hou, and Fuh-Gwo Chen</i>	
Enhancing UPnP Quality of Service by Intelligent Access Point	422
<i>Chia-Feng Kang, Kai-Hua Kuo, Ya-Chun Li, Tin-Yu Wu, Wei-Tsong Lee, and Jim-Min Lin</i>	

Color-Based Semantic Image Retrieval with Fuzzy-ART	426
<i>Chuan-Yu Chang, Hung-Jen Wang, and Ru-Hao Jian</i>	

Image/Video Watermarking and Forensics

An Image Structure Information Based Robust Hash for Tamper Detection and Localization	430
<i>Zhaoqing Liu, Qiong Li, Hui Zhang, and Xiyuan Peng</i>	
Tamper Detection for Shifted Double JPEG Compression	434
<i>Xian-zhe Meng, Shao-zhang Niu, and Jian-chen Zou</i>	
A Novel Robust Watermarking Method for Certificates Based on DFT and Hough Transforms	438
<i>Jiancheng Zou, Xin Yang, and Shaozhang Niu</i>	
Spread Spectrum-Based Image Watermarking Resistant to Rotation and Scaling Using Radon Transform	442
<i>Huawei Tian, Yao Zhao, Rongrong Ni, and Jeng-Shyang Pan</i>	
A High Payload Histogram-Based Reversible Watermarking Using Linear Prediction	446
<i>Bo Ou, Yao Zhao, Rongrong Ni, and Gang Cao</i>	
An Error Driven 3D Face Modeling Scheme Based on Partial Differential Equations	450
<i>Chuanjun Wang, Zhenfeng Shi, and Xiamu Niu</i>	
Image Retrieval Based on RST Invariant Features Extracted from Scale Invariant Keypoints	454
<i>Zhe-Ming Lu, Wei-Min Zheng, and Jing Wang</i>	

Digital Forensics and Security

ASM-SPV: A Model Checker for Security Protocols	458
<i>Jianhua Peng, Feng Liu, Zhenju Zhao, Danqing Huang, and Rui Xue</i>	
Camera Model Identification for JPEG Images via Tensor Analysis	462
<i>Ming Liu, Nenghai Yu, and Weihai Li</i>	
Secure and Efficient Generalized Signcryption Scheme Based on a Short ECDSA	466
<i>Chuanrong Zhang, Long Chi, and Yuqing Zhang</i>	
Regular Quasi-cyclic LDPC Codes with Girth 6 from Prime Fields	470
<i>Qingji Zheng, Xiangxue Li, Dong Zheng, and Baoan Guo</i>	
A Study of Mutual Authentication for P2P Trust Management	474
<i>Chunling Wang and Jingyu Feng</i>	
Enhanced Adaptive FEC Based Multiple Description Coding for Internet Video Streaming over Wireless Network	478
<i>Li Li, Qi Han, and Xiamu Niu</i>	
A Novel and Secure Image Interpolation Methods for Image Disguise	482
<i>Shen Wang, Qiong Li, Bian Yang, and Xiamu Niu</i>	

Formal Verification of HMQV Using ASM-SPV	486
<i>Danqing Huang, Rui Xue, Feng Liu, Jianhua Peng, Zhenju Zhao, and Dongyao Ji</i>	
Certificates Distributed Storage Scheme in the Trust Management System	490
<i>Ying Cai and Qinglong Wang</i>	

Techniques and Algorithms for Multimedia Security

Reduction of Interference for CDMA-Based Fingerprinting Scheme Based on Random Permutation	494
<i>Minoru Kuribayashi</i>	
On Some Properties of a Digital Watermarking Based on Complete Complementary Codes	498
<i>Tetsuya Kojima, Yoshiya Horii, Naoki Ohtani, and Thierno Sene</i>	
Detecting Revelation of Private Information on Online Social Networks	502
<i>Natsuki Watanabe and Hiroshi Yoshiura</i>	
Unified Metric for Measuring Anonymity and Privacy with Application to Online Social Network	506
<i>Komei Kamiyama, Tran Hong Ngoc, Isao Echizen, and Hiroshi Yoshiura</i>	
Privacy by Data Provenance with Digital Watermarking - A Proof-of-Concept Implementation for Medical Services with Electronic Health Records	510
<i>J�r�mie Tharaud, Sven Wohlgemuth, Isao Echizen, Noboru Sonehara, G�nter M�ller, and Pascal Lafourcade</i>	

Advanced Data Hiding and Coding Techniques for Audio Signals

Aerial Acoustic Modem with Decoding Capabilities Using a CELP-Based Speech Encoder	514
<i>Akira Nishimura</i>	
Improvement of Packet Loss Concealment for MP3 Audio Based on Switching of Concealment Method and Estimation of MDCT Signs	518
<i>Akinori Ito, Kiyoshi Konno, Masashi Ito, and Shozo Makino</i>	
Audio Information Hiding Based on Spatial Masking	522
<i>Ryouichi Nishimura</i>	
Design of IIR All-Pass Filter Based on Cochlear Delay to Reduce Embedding Limitations	526
<i>Masashi Unoki, Toshizo Kosugi, Atsushi Haniu, and Ryota Miyauchi</i>	
An Audio Steganography by a Low-Bit Coding Method with Wave Files	530
<i>Masahiro Wakiyama, Yasunobu Hidaka, and Koichi Nozaki</i>	
A Semi-lossless Steganography Technique for G.711 Telephony Speech	534
<i>Naofumi Aoki</i>	
A New Approach of Reversible Acoustic Steganography for Tampering Detection	538
<i>Xuping Huang, Isao Echizen, and Akira Nishimura</i>	

Computational Intelligence and Security

Vision-Based Hand Gesture Recognition Using Combinational Features	543
<i>Chenglong Yu, Xuan Wang, Hejiao Huang, Jianping Shen, and Kun Wu</i>	
Example-Based Facial Portraiture Style Learning	547
<i>Zhongmei Zhou, Xuan Wang, Zili Zhang, and Chenglong Yu</i>	
Multi-class Relationship Extraction from Biomedical Literature Using Maximum Entropy	551
<i>Lin Yao, Chengjie Sun, Xiaolong Wang, and Xuan Wang</i>	
Mirror-Like Gabor Features for Face Recognition under Varying Illumination Conditions	555
<i>Yingnan Zhao, Yan Ma, and Zhong Jin</i>	
An Image Level Set Method for Denoising	559
<i>Dazhi Zhang, Songsong Li, Boying Wu, and Jiebao Sun</i>	
A Perceptual Metric Based on Salient Information Entropy for 3D Mesh Distortion	563
<i>Zhenfeng Shi, Qiong Li, and Xiamu Niu</i>	
Detecting Resized JPEG Images by Analyzing High Frequency Elements in DCT Coefficients	567
<i>Toshihiko Yamasaki, Tomoaki Matsunami, and Kiyoharu Aizawa</i>	
Kernel Canonical Correlation with Similarity Refinement for Automatic Image Tagging	571
<i>Yanhui Xiao, Yao Zhao, and Zhenfeng Zhu</i>	
Multiple Description Wavelet Based Image Coding with Classification	575
<i>Chunyu Lin and Yao Zhao</i>	
Digital Image Forgery Detection by Local Statistical Models	579
<i>Jiří Grim, Petr Somol, and Pavel Pudil</i>	
Novel (n, n) Secret Image Sharing Scheme Based on Addition	583
<i>Lin Dong and Min Ku</i>	
Industrial Workflows Recognition by Computer Vision and AI Technologies	587
<i>Emmanuel Sardis and Theodora Varvarigou</i>	

High Efficiency Image/Video Coding and Transmission

Robust Video Transmission Scheme Based on Network Coding	591
<i>Song Xiao, Ji Lu, Yangli Wang, and Chengke Wu</i>	
An Error Concealment Approach for Pixel Based Wyner-Ziv Video Coding	595
<i>Yangli Wang, Chengke Wu, and Song Xiao</i>	
Optimized State-Distortion Extraction for Scalable Extension of H.264/AVC	599
<i>Ji Lu, Song Xiao, and Chengke Wu</i>	
A Pixel-Level Rate Control Algorithm for the Optimal Prediction Residual	603
<i>Hongwei Li, Song Xiao, Chengke Wu, and Yuli Feng</i>	
Distributed Compressive Hyperspectral Image Sensing	607
<i>Haiying Liu, Yunsong Li, Song Xiao, and Chengke Wu</i>	

A Digital Fingerprint Scheme Based on MPEG-2	611
<i>Yigang Zhou, Linghui Li, and Jia Liu</i>	

Advanced Event Detection and Intelligent Video Processing

Content-Aware Video Seam Carving Based on Bag of Visual Cubes	615
<i>Duan-Yu Chen and Yi-Shiou Luo</i>	
Frequency-Tuned Nighttime Brake-Light Detection	619
<i>Duan-Yu Chen and Yu-Hao Lin</i>	
Multiple Object Motion Detection for Robust Image Stabilization Using Block-Based Hough Transform	623
<i>Chi-Han Chuang, Yung-Chi-Lo, Chin-Chun Chang, and Shyi-Chyi Cheng</i>	
Adaptive Ultrasound Image Matching for Automatic Liver Disease Diagnosis Using Generalized Hough Transform	627
<i>Yu-Hsiang Wu, Yung-Chi Lo, Shyi-Chyi Cheng, and Chih-Lang Lin</i>	
Vision-Based Vehicle Surveillance and Parking Lot Management Using Multiple Cameras	631
<i>Li-Chih Chen, Jun-Wei Hsieh, Wei-Ru Lai, Chih-Xuan Wu, and Shin-Yu Chen</i>	
Human Activity Linkage Recording for Multiple Cameras with Disjoint Views	635
<i>I-Cheng Chang, Chieh-Yu Liu, and Chung-Lin Huang</i>	
Real-Time Video Enhancement for Moving-Object in the Dusk Environment Based on Pixel Classification	639
<i>Chao-Ho Chen, Che-Ping Su, Tsong-Yi Chen, and Da-Jinn Wang</i>	
Real-Time Counting Method for a Crowd of Moving People	643
<i>Tsong-Yi Chen, Chao-Ho Chen, Da-Jinn Wang, and Tsang-Jie Chen</i>	
A Fast Inter-frame Prediction Algorithm for H.264/AVC	647
<i>Pengyu Liu and Kebin Jia</i>	
A Self-Adaptive and Fast Motion Estimation Search Method for H.264/AVC	651
<i>Pengyu Liu and Kebin Jia</i>	
Key-Frame Extraction Using Kernel-Based Locality Preserving Learning	655
<i>Zhongbao Chen, Fuliang Bao, Zhigang Fang, and Zhen Li</i>	
Overlapping Interval Differences-Based Fast Intra Mode Decision for H.264/AVC	659
<i>Yan-Qiang Lei, Yuan-Gen Wang, and Fan Liang</i>	
A Novel Intra-frame Prediction Algorithm Based on Macro-block's Histogram for H.264/AVC	664
<i>Pengyu Liu and Kebin Jia</i>	

Advanced Multimedia Processing and Retrievals

A Saliency Map Model Based on the Principle of Maximum Information Gain	668
<i>Takashi Toriu, Shigeyoshi Nakajima, and Hiromitsu Hama</i>	

Estimation of Human Movements from Body Acceleration Monitoring Using One Nearest Neighbor Method - Ubiquitous Health Care	672
<i>Takaaki Kozaki, Shigeyoshi Nakajima, Tetsuo Tsujioka, Shinsuke Hara, Tadayuki Inoue, Hajime Nakamura, and Kazuhide Takeuchi</i>	
A Stochastic Model for Popularity Measures in Web Dynamics	676
<i>Hiromitsu Hama, Pyke Tin, Thi Thi Zin, and Takashi Toriu</i>	
A Markov Random Walk Model for Loitering People Detection	680
<i>Thi Thi Zin, Pyke Tin, Takashi Toriu, and Hiromitsu Hama</i>	
Real-Time Updatable Volumetric Display System Based on Inclined-Image Scanning	684
<i>Daisuke Miyazaki, Keisuke Ohno, and Takaaki Mukai</i>	

High Performance Networking, Digital Content and Ubiquitous Computing

A Decision Support System in Geriatric Care	688
<i>Nai-Wen Kuo</i>	
Attack Analysis for Automatic Monitoring System Used in the Wireless Networks	692
<i>Chung-Hsin Liu and I. Shao</i>	
The Study of Video Conference Transmission Security as an Example on Polycom	696
<i>Chung-Hsin Liu and Wu-Fan Hsu</i>	
Mobile Ad Hoc Network Applications in the Library	700
<i>Kuo-Kai Hsu and Dwen-Ren Tsai</i>	
Early Warning System for DDoS Attacking Based on Multilayer Deployment of Time Delay Neural Network	704
<i>Chang-Lung Tsai, Allen Y. Chang, and Ming-Szu Huang</i>	
Factors Affecting Consumers' Motivation in Online Group Buyers	708
<i>Wuu-Yee Chen and Pin-Hsiu Wu</i>	
Visual Development Platform for White-Box Algorithmic Trading	712
<i>Chia-Han Chou and Allen Y. Chang</i>	
Building Enterprise Data Centers Using Virtual and Cloud	716
<i>Dwen-Ren Tsai and Sheng-Wei Lin</i>	

Multimedia and Security Services in Mobile Cloud Computing

A Survey of Congestion Control Mechanisms in Wireless Sensor Networks	719
<i>Jing Zhao, Lei Wang, Suran Li, Xiaokang Liu, Zhuxiu Yuan, and Zhengjiu Gao</i>	
2.5D SIFT Descriptor for Facial Feature Extraction	723
<i>He Guo, Kai Zhang, and Qi Jia</i>	
A Low-Level Security Solving Method in Grid	727
<i>Weifeng Sun, Boxiang Dong, Zhenquan Qin, Juanyun Wang, and Mingchu Li</i>	
An Efficient Trust Mechanism in P2P Network	731
<i>Zhenquan Qin, Lei Wang, Mingchu Li, and Weifeng Sun</i>	

Based on Private Matching and Min-attribute Generalization for Privacy Preserving in Cloud Computing	735
<i>Jian Wang and Jiajin Le</i>	
Author Index	739