

# Table of Contents, Part I

## Volume I

### Art

Categorizing Traditional Chinese Painting Images . . . . .	1
<i>Shuqiang Jiang, Tiejun Huang</i>	
A Knowledge-Driven Approach for Korean Traditional Costume (Hanbok) Modeling . . . . .	9
<i>Yang-Hee Nam, Bo-Ran Lee, Crystal S. Oh</i>	
Retrieval of Chinese Calligraphic Character Image . . . . .	17
<i>Yueting Zhuang, Xiafen Zhang, Jiangqin Wu, Xiqun Lu</i>	

### Network (I)

Random Channel Allocation Scheme in HIPERLAN/2 . . . . .	25
<i>Eui-Seok Hwang, Jeong-Jae Won, You-Chang Ko, Hyong-Woo Lee, Choong-Ho Cho</i>	
A Two-Stage Queuing Approach to Support Real-Time QoS Guarantee for Multimedia Services in TDMA Wireless Networks . . . . .	33
<i>Ren-Hao Cheng, Po-Cheng Huang, Mong-Fong Horng, Jiang-Shiung Ker, Yau-Hwang Kuo</i>	
Performance Evaluation of Adaptive Rate Control (ARC) for Multimedia Traffic . . . . .	41
<i>Surasee Prahmkaew, Chanintorn Jittawiriyankoon</i>	

### Sports (I)

A Tennis Video Indexing Approach Through Pattern Discovery in Interactive Process . . . . .	49
<i>Peng Wang, Rui Cai, Shi-Qiang Yang</i>	
Online Play Segmentation for Broadcasted American Football TV Programs . . . . .	57
<i>Lixian Gu, Xiaoqing Ding, Xian-Sheng Hua</i>	
Semantic Analysis of Basketball Video Using Motion Information . . . . .	65
<i>Song Liu, Haoran Yi, Liang-Tien Chia, Deepu Rajan, Syin Chan</i>	

# Immersive Conferencing: Novel Interfaces and Paradigms for Remote Collaboration

Reach-Through-the-Screen:

A New Metaphor for Remote Collaboration .....	73
<i>Jonathan Foote, Qiong Liu, Don Kimber, Patrick Chiu, Frank Zhao</i>	

Working Documents .....	81
<i>Paul Luff, Hideaki Kuzuoka, Christian Heath, Jun Yamashita, Keiichi Yamazaki</i>	

Immersive Meeting Point .....	89
<i>Ralf Tanger, Peter Kauff, Oliver Schreer</i>	

EnhancedTable: Supporting a Small Meeting in Ubiquitous and Augmented Environment .....	97
<i>Hideki Koike, Shin'ichiro Nagashima, Yasuto Nakanishi, Yoichi Sato</i>	

Remote Collaboration on Physical Whiteboards .....	105
<i>Zhengyou Zhang, Li-wei He</i>	

## Network (II)

Aggressive Traffic Smoothing for Delivery of Online Multimedia .....	114
<i>Jeng-Wei Lin, Ray-I Chang, Jan-Ming Ho, Feipei Lai</i>	

Distributed Video Streaming Using Multicast (DVSM) .....	122
<i>Ramesh Yerraballi, ByungHo Lee</i>	

Centralized Peer-to-Peer Streaming with PFGS Video Codec .....	131
<i>Ivan Lee, Ling Guan</i>	

Buffer Level Estimation for Seamless Media Streaming in Mobile IPv6 Networks .....	139
<i>Dongwook Lee, JongWon Kim</i>	

Dynamic Walks for Searching Streaming Media in Peer-to-Peer Networks .....	147
<i>Zhou Su, Jiro Katto, Yasuhiko Yasuda</i>	

## Image Retrieval

An Image Retrieval Scheme Using Multi-instance and Pseudo Image Concepts .....	157
<i>Feng-Cheng Chang, Hsueh-Ming Hang</i>	

Representation of Clipart Image Using Shape and Color with Spatial Relationship .....	165
<i>Jeong-Hyun Cho, Chang-Gyu Choi, Yongseok Chang, Sung-Ho Kim</i>	
Automatic Categorization for WWW Images with Applications for Retrieval Navigation .....	174
<i>Koji Nakahira, Satoshi Ueno, Kiyoharu Aizawa</i>	
Region-Based Image Retrieval with Scale and Orientation Invariant Features .....	182
<i>Surong Wang, Liang-Tien Chia, Deepu Rajan</i>	
SOM-Based Sample Learning Algorithm for Relevance Feedback in CBIR .....	190
<i>Tatsunori Nishikawa, Takahiko Horiuchi, Hiroaki Kotera</i>	
Classification of Digital Photos Taken by Photographers or Home Users .....	198
<i>Hanghang Tong, Mingjing Li, Hong-Jiang Zhang, Jingrui He, Changshui Zhang</i>	
<b>Image Analysis (I)</b>	
Background Modeling Using Phase Space for Day and Night Video Surveillance Systems .....	206
<i>Yu-Ming Liang, Arthur Chun-Chieh Shih, Hsiao-Rong Tyan, Hong-Yuan Mark Liao</i>	
Sequential Robust Direct Motion Estimation with Equal Projective Basis .....	214
<i>Jong-Eun Ha, Dong-Joong Kang, Muh-Ho Jeong</i>	
Generation of 3D Urban Model Using Cooperative Hybrid Stereo Matching.....	222
<i>Dong-Min Woo, Howard Schultz, Young-Kee Jung, Kyu-Won Lee</i>	
Segmentation of Interest Objects Using the Hierarchical Mesh Structure .....	230
<i>Dong-Keun Lim, Yo-Sung Ho</i>	
A Rapid Scheme for Slow-Motion Replay Segment Detection .....	239
<i>Wei-Hong Chuang, Dun-Yu Hsiao, Soo-Chang Pei, Homer Chen</i>	
Recognition of Very Low-Resolution Characters from Motion Images Captured by a Portable Digital Camera .....	247
<i>Shinsuke Yanadume, Yoshito Mekada, Ichiro Ide, Hiroshi Murase</i>	

An Effective Anchorperson Shot Extraction Method Robust to False Alarms .....	255
<i>Sang-Kyun Kim, Doo Sun Hwang, Ji-Yeun Kim, Yang-Seock Seo</i>	
A Region Based Image Matching Method with Regularized SAR Model .....	263
<i>Yaowei Wang, Weiqiang Wang, Yanfei Wang</i>	
Shot Classification and Scene Segmentation Based on MPEG Compressed Movie Analysis .....	271
<i>Masaru Sugano, Masanori Furuya, Yasuyuki Nakajima, Hiromasa Yanagihara</i>	
Moving Object Segmentation: A Block-Based Moving Region Detection Approach .....	280
<i>Wei Zeng, Qingming Huang</i>	
A Multi-view Camera Tracking for Modeling of Indoor Environment .....	288
<i>Kiyoung Kim, Woontack Woo</i>	
Image Registration Using Triangular Mesh .....	298
<i>Ben Yip, Jesse S. Jin</i>	
Online Learning Objectionable Image Filter Based on SVM .....	304
<i>Yang Liu, Wei Zeng, Hongxun Yao</i>	
Motion Objects Segmentation Using a New Level Set Based Method .....	312
<i>Hongqiang Bao, Zhaoyang Zhang</i>	
3-D Shape Analysis of Anatomical Structures Based on an Interactive Multiresolution Approach .....	319
<i>Soo-Mi Choi, Jeong-Sik Kim, Yong-Guk Kim, Joo-Young Park</i>	
Integrating Color, Texture, and Spatial Features for Image Interpretation .....	327
<i>Hui-Yu Huang, Yung-Sheng Chen, Wen-Hsing Hsu</i>	
Automatic Video Genre Detection for Content-Based Authoring .....	335
<i>Sung Ho Jin, Tae Meon Bae, Yong Man Ro</i>	
<b>Face, Gesture, and Behavior (I)</b>	
Face Appeal Model Based on Statistics .....	344
<i>Bi Song, Mingjing Li, Zhiwei Li, Hong-Jiang Zhang, Zhengkai Liu</i>	
A Novel Gabor-LDA Based Face Recognition Method .....	352
<i>Yanwei Pang, Lei Zhang, Mingjing Li, Zhengkai Liu, Weiyang Ma</i>	

Gesture-Based User Interfaces for Handheld Devices Using Accelerometer .....	359
<i>Ikjin Jang, Wonbae Park</i>	
Face and Gesture Recognition Using Subspace Method for Human-Robot Interaction .....	369
<i>Md. Hasanuzzaman, T. Zhang, V. Ampornaramveth, M.A. Bhuiyan, Y. Shirai, H. Ueno</i>	
Spatial Histogram Features for Face Detection in Color Images .....	377
<i>Hongming Zhang, Debin Zhao</i>	
Correlation Filters for Facial Recognition Login Access Control .....	385
<i>Daniel E. Riedel, Wanquan Liu, Ronny Tjahyadi</i>	
Easy and Convincing Ear Modeling for Virtual Human .....	394
<i>Hui Zhang, In Kyu Park</i>	

## Virtual Reality and Computer Graphics

A Polyhedral Object Recognition Algorithm for Augmented Reality .....	402
<i>Dong-Joong Kang, Jong-Eun Ha, Muh-Ho Jeong</i>	
Spectral Coding of Three-Dimensional Mesh Geometry Information Using Dual Graph .....	410
<i>Sung-Yeol Kim, Seung-Uk Yoon, Yo-Sung Ho</i>	
Real-Time Free-Viewpoint Video Generation Using Multiple Cameras and a PC-Cluster .....	418
<i>Megumu Ueda, Daisaku Arita, Rin-ichiro Taniguchi</i>	
Framework for Smooth Optical Interaction Using Adaptive Subdivision in Virtual Production .....	426
<i>Seung Man Kim, Naveen Dachuri, Kwan H. Lee</i>	
Projection-Based Registration Using Color and Texture Information for Virtual Environment Generation .....	434
<i>Sehwan Kim, Kiyoun Kim, Woontack Woo</i>	
Enhanced Synergistic Image Creator: An NPR Method with Natural Curly Brushstrokes .....	444
<i>Atsushi Kasao, Kazunori Miyata</i>	

## Content Production (I)

An XMT Authoring System Supporting Various Presentation Environments .....	453
<i>Heesun Kim</i>	

An Adaptive Scene Compositor Model in MPEG-4 Player for Mobile Device .....	461
<i>Hyunju Lee, Sangwook Kim</i>	
JPEG2000 Image Adaptation for MPEG-21 Digital Items .....	470
<i>Yiqun Hu, Liang-Tien Chia, Deepu Rajan</i>	
An Annotation Method and Application for Video Contents Based on a Semantic Graph .....	478
<i>Tomohisa Akafuji, Kaname Harumoto, Keishi Kandori, Kôiti Hasida, Shinji Shimojo</i>	
An Annotated-Objects Assist Method for Extraction of Ordinary-Objects in a Video Content Generation Support System ....	487
<i>Wenli Zhang, Shunsuke Kamijyo, Masao Sakauchi</i>	
<b>Intelligent Media Integration for Social Information Infrastructure</b>	
Free-Viewpoint TV (FTV) System .....	497
<i>Toshiaki Fujii, Masayuki Tanimoto</i>	
In-Car Speech Recognition Using Distributed Multiple Microphones .....	505
<i>Weifeng Li, Takanori Nishino, Chiyomi Miyajima, Katsunobu Ito, Kazuya Takeda, Fumitada Itakura</i>	
Development of Advanced Image Processing Technology and Its Application to Computer Assisted Diagnosis and Surgery .....	514
<i>Takayuki Kitasaka, Kensaku Mori, Yasuhito Suenaga</i>	
Discussion Mining: Annotation-Based Knowledge Discovery from Real World Activities .....	522
<i>Katashi Nagao, Katsuhiko Kaji, Daisuke Yamamoto, Hironori Tomobe</i>	
Determining Correspondences Between Sensory and Motor Signals .....	532
<i>Kento Nishibori, Jinji Chen, Yoshinori Takeuchi, Tetsuya Matsumoto, Hiroaki Kudo, Noboru Ohnishi</i>	
<b>Approaches or Methods of Security Engineering</b>	
Architecture of Authentication Mechanism for Emerging T-commerce Environments .....	540
<i>Sangkyun Kim, Hong Joo Lee, Choon Seong Leem</i>	
Threat Description for Developing Security Countermeasure .....	548
<i>Seung-youn Lee, Myong-chul Shin, Jae-sang Cha, Tai-hoon Kim</i>	

RPS: An Extension of Reference Monitor to Prevent Race-Attacks . . . . .	556
<i>Jongwoon Park, Gunhee Lee, Sangha Lee, Dong-kyoo Kim</i>	
SITIS: Scalable Intrusion Tolerance Middleware for Internet Service Survivability . . . . .	564
<i>GangShin Lee, Chaetae Im, TaeJin Lee, HyungJong Kim, Dong Hoon Lee</i>	
On Minimizing Distortion in Secure Data-Hiding for Binary Images . . . . .	572
<i>Yongsu Park, Yookun Cho</i>	
Software Design Method Enhanced by Appended Security Requirements . . . . .	578
<i>Eun-ser Lee, Sun-myoungh Hwang</i>	

## Multimedia Servers

On the Disk Layout for Periodical Video Broadcast Services . . . . .	586
<i>Meng-Huang Lee</i>	
Paged Segment Striping Scheme for the Dynamic Scheduling of Continuous Media Servers . . . . .	594
<i>KyungOh Lee, J.B. Lee, Kee-Wook Rim</i>	
A Heuristic Packet Scheduling Algorithm for Media Streaming with Server Diversity . . . . .	602
<i>Yajie Liu, Wenhua Dou, Heying Zhang</i>	
Proxy Caching Scheme Based on the Characteristics of Streaming Media Contents on the Internet . . . . .	610
<i>Hyeonok Hong, Seungwon Lee, Seongho Park, Yongju Kim, Kidong Chung</i>	
A Distributed VOD Server Based on VIA and Interval Cache . . . . .	618
<i>Soo-Cheol Oh, Sang-Hwa Chung</i>	

## Video Retrieval

Clustering of Video Packets Using Interactive Refinement by Relevance Feedback . . . . .	626
<i>Yukihiro Kinoshita, Naoko Nitta, Noboru Babaguchi</i>	
Semantic Video Indexing and Summarization Using Subtitles . . . . .	634
<i>Haoran Yi, Deepu Rajan, Liang-Tien Chia</i>	
Audio Visual Cues for Video Indexing and Retrieval . . . . .	642
<i>Paisarn Muneesawang, Tahir Amin, Ling Guan</i>	

Key Image Extraction from a News Video Archive  
for Visualizing Its Semantic Structure .....

650

*Hiroshi Mo, Fuminori Yamagishi, Ichiro Ide, Norio Katayama,  
Shin'ichi Satoh, Masao Sakauchi*

Author Index .....

659



# Table of Contents, Part II

## Volume II

### Application of Video Browsing to Consumer Video Browsing Products

Generic Summarization Technology for Consumer Video .....	1
<i>Masaru Sugano, Yasuyuki Nakajima, Hiromasa Yanagihara, Akio Yoneyama</i>	
Movie-in-a-Minute: Automatically Generated Video Previews .....	9
<i>Mauro Barbieri, Nevenka Dimitrova, Lalitha Agnihotri</i>	
Automatic Sports Highlights Extraction with Content Augmentation ....	19
<i>Kongwah Wan, Jinjun Wang, Changsheng Xu, Qi Tian</i>	
Audio-Assisted Video Browsing for DVD Recorders .....	27
<i>Ajay Divakaran, Isao Otsuka, Regunathan Radhakrishnan, Kazuhiko Nakane, Masaharu Ogawa</i>	

### Watermarking (I)

A Robust Image Watermarking Technique for JPEG Images Using QuadTrees .....	34
<i>Kil-Sang Yoo, Mi-Ae Kim, Won-Hyung Lee</i>	
A Fragile Watermarking Technique for Image Authentication Using Singular Value Decomposition .....	42
<i>Vivi Oktavia, Won-Hyung Lee</i>	
Visual Cryptography for Digital Watermarking in Still Images .....	50
<i>Gwo-Chin Tai, Long-Wen Chang</i>	
A New Object-Based Image Watermarking Robust to Geometrical Attacks .....	58
<i>Jung-Soo Lee, Whoi-Yul Kim</i>	
A Selective Image Encryption Scheme Based on JPEG2000 Codec .....	65
<i>Shiquo Lian, Jinsheng Sun, Dengfeng Zhang, Zhiquan Wang</i>	
VQ-Based Gray Watermark Hiding Scheme and Genetic Index Assignment .....	73
<i>Feng-Hsing Wang, Jeng-Shyang Pan, Lakhmi Jain, Hsiang-Cheh Huang</i>	

## User Interface (I)

Advanced Paper Document in a Projection Display . . . . .	81
<i>Kwangjin Hong, Keechul Jung</i>	
Improving Web Browsing on Small Devices Based on Table Classification . . . . .	88
<i>Chong Wang, Xing Xie, Wenyuan Wang, Wei-Ying Ma</i>	
A Java-Based Collaborative Authoring System for Multimedia Presentation . . . . .	96
<i>Mee Young Sung, Do Hyung Lee</i>	
Object Tracking and Object Change Detection in Desktop Manipulation for Video-Based Interactive Manuals . . . . .	104
<i>Yosuke Tsubuku, Yuichi Nakamura, Yuichi Ohta</i>	
Design of an Integrated Wearable Multimedia Interface for In-Vehicle Telematics . . . . .	113
<i>Seongil Lee, Sang Hyuk Hong</i>	

## Content-Based Image Retrieval

Video Scene Retrieval with Sign Sequence Matching Based on Audio Features . . . . .	121
<i>Keisuke Morisawa, Naoko Nitta, Noboru Babaguchi</i>	
Architecture and Analysis of Color Structure Descriptor for Real-Time Video Indexing and Retrieval . . . . .	130
<i>Jing-Ying Chang, Chung-Jr Lian, Hung-Chi Fang, Liang-Gee Chen</i>	
Automatic Salient-Object Extraction Using the Contrast Map and Salient Points . . . . .	138
<i>SooYeong Kwak, ByoungChul Ko, Hyeran Byun</i>	
Shape-Based Image Retrieval Using Invariant Features . . . . .	146
<i>Jong-Seung Park, TaeYong Kim</i>	
Visual Trigger Templates for Knowledge-Based Indexing . . . . .	154
<i>Alejandro Jaimes, Qinhui Wang, Noriji Kato, Hitoshi Ikeda, Jun Miyazaki</i>	
Browsing and Similarity Search of Videos Based on Cluster Extraction from Graphs . . . . .	162
<i>Seiji Hotta, Senya Kiyasu, Sueharu Miyahara</i>	
Correlation Learning Method Based on Image Internal Semantic Model for CBIR . . . . .	172
<i>Lijuan Duan, Guojun Mao, Wen Gao</i>	

Controlling Concurrent Accesses in Multimedia Databases for Decision Support .....	180
<i>Woochun Jun, Suk-ki Hong</i>	
Image Retrieval by Categorization Using LVQ Network with Wavelet Domain Perceptual Features .....	188
<i>M.K. Bashar, Noboru Ohnishi, Kiyoshi Agusa</i>	
A Content-Based News Video Browsing and Retrieval System: NewsBR .....	197
<i>Huayong Liu, Zhang Hui</i>	
A News Video Browser Using Identical Video Segment Detection .....	205
<i>Fuminori Yamagishi, Shin'ichi Satoh, Masao Sakauchi</i>	
Pseudo Relevance Feedback Based on Iterative Probabilistic One-Class SVMs in Web Image Retrieval .....	213
<i>Jingrui He, Mingjing Li, Zhiwei Li, Hong-Jiang Zhang, Hanghang Tong, Changshui Zhang</i>	
Robust Video Similarity Retrieval Using Temporal MIMB Moments .....	221
<i>Duan-Yu Chen, Suh-Yin Lee</i>	
Complete Performance Graphs in Probabilistic Information Retrieval .....	229
<i>N. Sebe, D.P. Huijsmans, Q. Tian, T. Gevers</i>	
A New MPEG-7 Standard: Perceptual 3-D Shape Descriptor .....	238
<i>Duck Hoon Kim, In Kyu Park, Il Dong Yun, Sang Uk Lee</i>	
News Video Summarization Based on Spatial and Motion Feature Analysis .....	246
<i>Wen-Nung Lie, Chun-Ming Lai</i>	
<b>Sports (II)</b>	
SketchIt: Basketball Video Retrieval Using Ball Motion Similarity .....	256
<i>Sitaram Bhagavathy, Motaz El-Saban</i>	
Implanting Virtual Advertisement into Broadcast Soccer Video .....	264
<i>Changsheng Xu, Kong Wah Wan, Son Hai Bui, Qi Tian</i>	
Automatic Video Summarization of Sports Videos Using Metadata .....	272
<i>Yoshimasa Takahashi, Naoko Nitta, Noboru Babaguchi</i>	
Classification of Frames from Broadcasted Soccer Video and Applications .....	281
<i>Qing Tang, Jesse S. Jin, Haiping Sun</i>	

An Online Learning Framework for Sports Video View Classification . . . .	289
<i>Jun Wu, XianSheng Hua, JianMin Li, Bo Zhang, HongJiang Zhang</i>	
A Semantic Description Scheme of Soccer Video Based on MPEG-7 . . . . .	298
<i>Lin Liu, Xiuzi Ye, Min Yao, Sanyuan Zhang</i>	
Spatio-temporal Pattern Mining in Sports Video . . . . .	306
<i>Dong-Jun Lan, Yu-Fei Ma, Wei-Ying Ma, Hong-Jiang Zhang</i>	
Archiving Tennis Video Clips Based on Tactics Information . . . . .	314
<i>Jenny R. Wang, Nandan Prameswaran, Xinguo Yu, Changsheng Xu, Qi Tian</i>	
<b>Network (III)</b>	
Performance Evaluation of High-Speed TCP Protocols with Pacing . . . . .	322
<i>Young-Soo Choi, Kang-Won Lee, You-Ze Cho</i>	
Time-Triggered and Message-Triggered Object Architecture for Distributed Real-Time Multimedia Services . . . . .	330
<i>Doo-Hyun Kim, Eun Hwan Jo, Moon Hae Kim</i>	
A Novel Multiple Time Scale Congestion Control Scheme for Multimedia Traffic . . . . .	338
<i>Hao Yin, Chuang Lin, Ting Cui, Xiao-meng Huang, Zhang-xi Tan</i>	
Dynamic Programming Based Adaptation of Multimedia Contents in UMA . . . . .	347
<i>Truong Cong Thang, Yong Ju Jung, Yong Man Ro</i>	
Performance Analysis of MAC Protocol for EPON Using OPNET . . . . .	356
<i>Min-Suk Jung, Jong-hoon Eom, Sung-Ho Kim</i>	
Adaptive FEC Control for Reliable High-Speed UDP-Based Media Transport . . . . .	364
<i>Young-Woo Kwon, Hyeyoung Chang, JongWon Kim</i>	
Efficient Overlay Network for P2P Content Sharing Based on Network Identifier . . . . .	373
<i>Chanmo Park, JongWon Kim</i>	
A Forward-Backward Voice Packet Loss Concealment Algorithm for Multimedia over IP Network Services . . . . .	381
<i>Mi Suk Lee, Hong Kook Kim, Seung Ho Choi, Eung Don Lee, Do Young Kim</i>	

A Delay-Based End-to-End Congestion Avoidance Scheme for Multimedia Networks . . . . .	389
<i>Li Yan, Bin Qiu, Lichang Che</i>	

Dynamic Bandwidth Allocation for Internet Telephony . . . . .	397
<i>Yiu-Wing Leung</i>	

## Streaming (I)

A Broadcasting Technique for Holographic 3D Movie Using Network Streaming . . . . .	405
<i>Kunihiko Takano, Koki Sato, Ryoji Wakabayashi, Kenji Muto, Kazuo Shimada</i>	

Coping with Unreliable Peers for Hybrid Peer-to-Peer Media Streaming . . . . .	415
<i>Sung-Hoon Sohn, Yun-Cheol Baek, Juno Chang</i>	

Evaluation of Token Bucket Parameters for VBR MPEG Video . . . . .	423
<i>Sang-Hyun Park, Yoon Kim</i>	

Perceptual Video Streaming by Adaptive Spatial-Temporal Scalability . . . . .	431
<i>Wei Lai, Xiao-Dong Gu, Ren-Hua Wang, Li-Rong Dai, Hong-Jiang Zhang</i>	

A Proxy Caching System Based on Multimedia Streaming Service over the Internet . . . . .	439
<i>Hui Guo, Jingli Zhou, Dong Zeng, Shengsheng Yu</i>	

Simulation and Development of Event-Driven Multimedia Session . . . . .	447
<i>Nashwa Abdel-Baki, Hans Peter Großmann</i>	

Applying Linux High-Availability and Load Balancing Servers for Video-on-Demand (VOD) Systems . . . . .	455
<i>Chao-Tung Yang, Ko-Tzu Wang, Kuan-Ching Li, Liang-Teh Lee</i>	

## Visual Content Mining in Multimedia Documents

Indexing Issues in Supporting Similarity Searching . . . . .	463
<i>Hanan Samet</i>	

Efficient Visual Content Retrieval and Mining in Videos . . . . .	471
<i>Josef Sivic, Andrew Zisserman</i>	

Fast and Robust Short Video Clip Search for Copy Detection . . . . .	479
<i>Junsong Yuan, Ling-Yu Duan, Qi Tian, Surendra Ranganath, Changsheng Xu</i>	

Mining Large-Scale Broadcast Video Archives Towards Inter-video Structuring .....	489
<i>Norio Katayama, Hiroshi Mo, Ichiro Ide, Shin'ichi Satoh</i>	
Sample Selection Strategies for Relevance Feedback in Region-Based Image Retrieval .....	497
<i>Marin Ferecatu, Michel Crucianu, Nozha Boujemaa</i>	

## Compression (I)

Comparison of Two Different Approaches to Detect Perceptual Noise for MPEG-4 AAC .....	505
<i>Cheng-Hsun Yu, Shingchern D. You</i>	
Optimum End-to-End Distortion Estimation for Error Resilient Video Coding .....	513
<i>Yuan Zhang, Qingming Huang, Yan Lu, Wen Gao</i>	
Enhanced Stochastic Bit Reshuffling for Fine Granular Scalable Video Coding .....	521
<i>Wen-Hsiao Peng, Tihao Chiang, Hsueh-Ming Hang, Chen-Yi Lee</i>	
High-Performance Motion-JPEG2000 Encoder Using Overlapped Block Transferring and Pipelined Processing .....	529
<i>Byeong-Doo Choi, Min-Cheol Hwang, Ju-Hun Nam, Kyung-Hoon Lee, Sung-Jea Ko</i>	
Low-Power Video Decoding for Mobile Multimedia Applications .....	537
<i>Seongsoo Lee, Min-Cheol Hong</i>	
Adaptive Macro Motion Vector Quantization .....	545
<i>Luis A. da Silva Cruz</i>	

## Face, Gesture, and Behavior (II)

Automatic, Effective, and Efficient 3D Face Reconstruction from Arbitrary View Image .....	553
<i>Changhu Wang, Shuicheng Yan, Hua Li, Hongjiang Zhang, Mingjing Li</i>	
Recognition and Retrieval of Face Images by Semi-supervised Learning .....	561
<i>Kohei Inoue, Kiichi Urahama</i>	
3-D Facial Expression Recognition-Synthesis on PDA Incorporating Emotional Timing .....	569
<i>Doo-Soo Lee, Yang-Bok Lee, Soo-Mi Choi, Yong-Guk Kim, Moon-Hyun Kim</i>	

Probabilistic Face Tracking Using Boosted Multi-view Detector . . . . .	577
<i>Peihua Li, Haijing Wang</i>	
Face Samples Re-lighting for Detection Based on the Harmonic Images . . . . .	585
<i>Jie Chen, Yuemin Li, Laiyun Qing, Baocai Yin, Wen Gao</i>	
A Dictionary Registration Method for Reducing Lighting Fluctuations in Subspace Face Recognition . . . . .	593
<i>Kenji Matsuo, Masayuki Hashimoto, Atsushi Koike</i>	
<b>Applications (I)</b>	
A 3D-Dialogue System Between Game Characters to Improve Reality in MMORPG . . . . .	601
<i>Dae-Woong Rhee, Il-Seok Won, Hyunjoo Song, Hung Kook Park, Juno Chang, Kang Ryoung Park, Yongjoo Cho</i>	
A Hybrid Approach to Detect Adult Web Images . . . . .	609
<i>Qing-Fang Zheng, Ming-Ji Zhang, Wei-Qiang Wang</i>	
A Hierarchical Dynamic Bayesian Network Approach to Visual Tracking . . . . .	617
<i>Hua Li, Rong Xiao, Hong-Jiang Zhang, Li-Zhong Peng</i>	
A Hybrid Architectural Framework for Digital Home Multimedia Multi-modal Collaboration Services . . . . .	625
<i>Doo-Hyun Kim, Vinod Cherian Joseph, Kyunghee Lee, Eun Hwan Jo</i>	
E-learning as Computer Games: Designing Immersive and Experiential Learning . . . . .	633
<i>Ang Chee Siang, G.S.V. Radha Krishna Rao</i>	
Event-Based Surveillance System for Efficient Monitoring . . . . .	641
<i>Do Joon Jung, Se Hyun Park, Hang Joon Kim</i>	
A Collaborative Multimedia Authoring System Based on the Conceptual Temporal Relations . . . . .	649
<i>Mee Young Sung</i>	
Multimedia Integration for Cooking Video Indexing . . . . .	657
<i>Reiko Hamada, Koichi Miura, Ichiro Ide, Shin'ichi Satoh, Shuichi Sakai, Hidehiko Tanaka</i>	
Teleconference System with a Shared Working Space and Face Mouse Interaction . . . . .	665
<i>Jin Hak Kim, Sang Chul Ahn, Hyoung-Gon Kim</i>	

## User Interface (II)

Performance Analysis for Serially Concatenated FEC in IEEE802.16a over Wireless Channels .....	672
<i>Kao-Lung Huang, Hsueh-Ming Hang</i>	
Successive Interference Cancellation for CDMA Wireless Multimedia Services .....	680
<i>Jin Young Kim, Yong Kim</i>	
SCORM-Based Contents Collecting Using Mobile Agent in M-Learning .....	688
<i>Sun-Gwan Han, Hee-Seop Han, Jae-Bong Kim</i>	
Improved Bit-by-Bit Binary Tree Algorithm in Ubiquitous ID System....	696
<i>Ho-Seung Choi, Jae-Ryong Cha, Jae-Hyun Kim</i>	
Automatic Synchronized Browsing of Images Across Multiple Devices....	704
<i>Zhigang Hua, Xing Xie, Hanqing Lu, Wei-Ying Ma</i>	
An Intelligent Handoff Protocol for Adaptive Multimedia Streaming Service in Mobile Computing Environment .....	712
<i>Jang-Woon Baek, Dae-Wha Seo</i>	
Platform Architecture for Seamless MMS Service over WLAN and CDMA2000 Networks .....	720
<i>Su-Yong Kim, Yong-Bum Cho, Sung-Joon Cho</i>	
Make Stable QoS in Wireless Multimedia Ad Hoc Network with Transmission Diversity .....	728
<i>Chao Zhang, Mingmei Li, Xiaokang Lin, Shigeki Yamada, Mitsutoshi Hatori</i>	
Gaze from Motion: Towards Natural User Interfaces .....	736
<i>Mun-Ho Jeong, Masamichi Ohsugi, Ryuji Funayama, Hiroki Mori</i>	
The Development of MPEG-4 Based RTSP System for Mobile Multimedia Streaming Services .....	746
<i>Sangeun Lee, Hyunwoo Park, Taesoo Yun</i>	
Seamless Mobile Service for Pervasive Multimedia .....	754
<i>Enyi Chen, Degan Zhang, Yuanchun Shi, Guangyou Xu</i>	
Transformation of MPEG-4 Contents for a PDA Device .....	762
<i>Sangwook Kim, Kyungdeok Kim, Sookyoung Lee</i>	



Semantic Retrieval in a Large-Scale Video Database by Using Both Image and Text Feature .....	770
<i>Chuan Yu, Hiroshi Mo, Norio Katayama, Shin'ichi Satoh, Shoichiro Asano</i>	

## Image Analysis (II)

Performance of Correlation-Based Stereo Algorithm with Respect to the Change of the Window Size .....	778
<i>Dong-Min Woo, Howard Schultz, Edward Riseman, Allen Hanson</i>	
Consideration of Illuminant Independence in MPEG-7 Color Descriptors .....	786
<i>Sang-Kyun Kim, Yanglim Choi, Wonhee Choe, Du-Sik Park, Ji-Yeun Kim, Yang-Seock Seo</i>	
Improvement on Colorization Accuracy by Partitioning Algorithm in CIELAB Color Space .....	794
<i>Tomohisa Takahama, Takahiko Horiuchi, Hiroaki Kotera</i>	
Gabor-Kernel Fisher Analysis for Face Recognition .....	802
<i>Baochang Zhang</i>	
Film Line Scratch Detection Using Neural Network .....	810
<i>Sin Kuk Kang, Eun Yi Kim, Kee Chul Jung, Hang Joon Kim</i>	
A Simplified Half Pixel Motion Estimation Algorithm Based on the Spatial Correlation .....	818
<i>HyoSun Yoon, Miyoung Kim</i>	
A New Tracking Mechanism for Semi-automatic Video Object Segmentation .....	824
<i>Zhi Liu, Jie Yang, Ningsong Peng</i>	
A Visual Model for Estimating the Perceptual Redundancy Inherent in Color Images .....	833
<i>Chun-Hsien Chou, Kuo-Cheng Liu</i>	
Selective Image Sharpening by Simultaneous Nonlinear-Diffusion Process with Spatially Varying Parameter Presetting .....	841
<i>Takahiro Saito, Shigemitsu Anyoji, Takashi Komatsu</i>	
Directional Weighting-Based Demosaicking Algorithm .....	849
<i>Tsung-Nan Lin, Chih-Lung Hsu</i>	
A New Text Detection Algorithm in Images/Video Frames .....	858
<i>Qixiang Ye, Qingming Huang</i>	

Automatic Video Object Tracking Using a Mosaic-Based Background . . . .	866
<i>Young-Kee Jung, Kyu-Won Lee, Dong-Min Woo, Yo-Sung Ho</i>	

## Audio Analysis

Semantic Region Detection in Acoustic Music Signals . . . . .	874
<i>Namunu Chinthaka Maddage, Changsheng Xu, Arun Shenoy, Ye Wang</i>	

Audio Classification for Radio Broadcast Indexing: Feature Normalization and Multiple Classifiers Decision . . . . .	882
<i>Christine S��nac, Eliathamby Ambikairajh</i>	

Dominant Feature Vectors Based Audio Similarity Measure . . . . .	890
<i>Jing Gu, Lie Lu, Rui Cai, Hong-Jiang Zhang, Jian Yang</i>	

## Moving from Content to Concept-Based Image/Video Retrieval

Generative Grammar of Elemental Concepts . . . . .	898
<i>Jose A. Lay, Ling Guan</i>	

Learning Image Manifold Using Web Data . . . . .	907
<i>Xin-Jing Wang, Wei-Ying Ma, Xing Li</i>	

Novel Concept for Video Retrieval in Life Log Application . . . . .	915
<i>Datchakorn Tancharoen, Kiyoharu Aizawa</i>	

Content-Based Retrieval of 3D Head Models Using a Single Face View Query . . . . .	924
<i>Pui Fong Yeung, Hau San Wong, Horace H.-S. Ip</i>	

Region-Based Image Retrieval with Perceptual Colors . . . . .	931
<i>Ying Liu, Dengsheng Zhang, Guojun Lu, Wei-Ying Ma</i>	

## H.264

Converting DCT Coefficients to H.264/AVC Transform Coefficients . . . .	939
<i>Jun Xin, Anthony Vetro, Huifang Sun</i>	

An Adaptive Hybrid Mode Decision Scheme for H.264/AVC Video over Unreliable Packet Networks . . . . .	947
<i>Feng Huang, Jenq-Neng Hwang, Yuzhuo Zhong</i>	

Workload Characterization of the H.264/AVC Decoder . . . . .	957
<i>Tse-Tsung Shih, Chia-Lin Yang, Yi-Shin Tung</i>	

An Efficient Traffic Smoothing Method for MPEG-4 Part-10 AVC/H.264 Bitstream over Wireless Network . . . . .	967
<i>Kwang-Pyo Choi, Inchoon Choi, Byeungwoo Jeon, Keun-Young Lee</i>	
An Error Resilience Scheme for Packet Loss Recover of H.264 Video . . . . .	975
<i>Ziqing Mao, Rong Yan, Ling Shao, Dong Xie</i>	
Key Techniques of Bit Rate Reduction for H.264 Streams . . . . .	985
<i>Peng Zhang, Qing-Ming Huang, Wen Gao</i>	
<b>Face, Gesture, and Behavior (III)</b>	
Salient Region Detection Using Weighted Feature Maps Based on the Human Visual Attention Model . . . . .	993
<i>Yiqun Hu, Xing Xie, Wei-Ying Ma, Liang-Tien Chia, Deepu Rajan</i>	
An Attention-Based Decision Fusion Scheme for Multimedia Information Retrieval . . . . .	1001
<i>Xian-Sheng Hua, Hong-Jiang Zhang</i>	
Approximating Inference on Complex Motion Models Using Multi-model Particle Filter . . . . .	1011
<i>Jianyu Wang, Debin Zhao, Shiguang Shan, Wen Gao</i>	
Human Activity Recognition in Archaeological Sites by Hidden Markov Models . . . . .	1019
<i>Marco Leo, Paolo Spagnolo, Tiziana D'Orazio, Arcangelo Distante</i>	
An HMM Based Gesture Recognition for Perceptual User Interface . . . . .	1027
<i>HySun Park, EunYi Kim, SangSu Jang, HangJoon Kim</i>	
Vision-Based Sign Language Recognition Using Sign-Wise Tied Mixture HMM . . . . .	1035
<i>Liangguo Zhang, Gaolin Fang, Wen Gao, Xilin Chen, Yiqiang Chen</i>	
<b>Author Index . . . . .</b>	<b>1043</b>



# Table of Contents, Part III

## Human-Scale Virtual Reality and Interaction

WARAJI: Foot-Driven Navigation Interfaces for Virtual Reality Applications . . . . .	1
<i>Salvador Barrera, Piperakis Romanos, Suguru Saito, Hiroki Takahashi, Masayuki Nakajima</i>	
Time Space Interface Using DV (Digital Video) and GPS (Global Positioning System) Technology – A Study with an Art Project “Field-Work@Alsace” . . . . .	8
<i>Masaki Fujihata</i>	
Action Generation from Natural Language . . . . .	15
<i>Satoshi Funatsu, Tomofumi Koyama, Suguru Saito, Takenobu Tokunaga, Masayuki Nakajima</i>	
Human-Scale Interaction with a Multi-projector Display and Multimodal Interfaces . . . . .	23
<i>Naoki Hashimoto, Jaeho Ryu, Seungzoo Jeong, Makoto Sato</i>	
Entertainment Applications of Human-Scale Virtual Reality Systems . . . .	31
<i>Akihiko Shirai, Kiichi Kobayashi, Masahiro Kawakita, Shoichi Hasegawa, Masayuki Nakajima, Makoto Sato</i>	
Analysis and Synthesis of Latin Dance Using Motion Capture Data . . . . .	39
<i>Noriko Nagata, Kazutaka Okumoto, Daisuke Iwai, Felipe Toro, Seiji Inokuchi</i>	

## Surveillance and Tracking

Web-Based Telepresence System Using Omni-directional Video Streams . . . . .	45
<i>Kazumasa Yamazawa, Tomoya Ishikawa, Tomokazu Sato, Sei Ikeda, Yutaka Nakamura, Kazutoshi Fujikawa, Hideki Sunahara, Naokazu Yokoya</i>	
Wide View Surveillance System with Multiple Smart Image Sensors and Mirrors . . . . .	53
<i>Ryusuke Kawahara, Satoshi Shimizu, Takayuki Hamamoto</i>	
Object Tracking and Identification in Video Streams with Snakes and Points . . . . .	61
<i>Bruno Lameyre, Valerie Gouet</i>	

Using a Non-prior Training Active Feature Model . . . . .	69
<i>Sangjin Kim, Jinyoung Kang, Jeongho Shin, Seongwon Lee, Joonki Paik, Sangkyu Kang, Besma Abidi, Mongi Abidi</i>	
An Immunological Approach to Raising Alarms in Video Surveillance . . . .	79
<i>Lukman Sasmita, Wanquan Liu, Svetha Venkatesh</i>	
Sat-Cam: Personal Satellite Virtual Camera . . . . .	87
<i>Hansung Kim, Itaru Kitahara, Kiyoshi Kogure, Norihiro Hagita, Kwanghoon Sohn</i>	

### Image Analysis (III)

A Linear Approximation Based Method for Noise-Robust and Illumination-Invariant Image Change Detection . . . .	95
<i>Bin Gao, Tie-Yan Liu, Qian-Sheng Cheng, Wei-Ying Ma</i>	
3D Model Similarity Measurement with Geometric Feature Map Based on Phase-Encoded Range Image . . . . .	103
<i>Donghui Wang, Chenyang Cui</i>	
Automatic Peak Number Detection in Image Symmetry Analysis . . . . .	111
<i>Jingrui He, Mingjing Li, Hong-Jiang Zhang, Hanghang Tong, Changshui Zhang</i>	
Image Matching Based on Singular Value Decomposition . . . . .	119
<i>Feng Zhao</i>	
Image Matching Based on Scale Invariant Regions . . . . .	127
<i>Lei Qin, Wei Zeng, Weiqiang Wang</i>	

### Compression (II)

A Method for Blocking Effect Reduction Based on Optimal Filtering . . . .	135
<i>Daehee Kim, Yo-Sung Ho</i>	
Novel Video Error Concealment Using Shot Boundary Detection . . . . .	143
<i>You-Neng Xiao, Xiang-Yang Xue, Ruo-Nan Pu, Hong Lu, Congjie Mi</i>	
Using Only Long Windows in MPEG-2/4 AAC Encoding . . . . .	151
<i>Fu-Mau Chang, Shingchern D. You</i>	
Frequency Weighting and Selective Enhancement for MPEG-4 Scalable Video Coding . . . . .	159
<i>Seung-Hwan Kim, Yo-Sung Ho</i>	
Efficient Multiview Video Coding Based on MPEG-4 . . . . .	167
<i>Wenzian Yang, King Nghi Ngan, Jianfei Cai</i>	

Block Matching Using Integral Frame Attributes .....	175
<i>Viet Anh Nguyen, Yap-Peng Tan</i>	
Impact of Similarity Threshold on Arbitrary Shaped Pattern Selection Very Low Bit-Rate Video Coding Algorithm .....	184
<i>Manoranjana Paul, Manzur Murshed</i>	
A Study on the Quantization Scheme in H.264/AVC and Its Application to Rate Control .....	192
<i>Siwei Ma, Wen Gao, Debin Zhao, Yan Lu</i>	
An Efficient VLSI Implementation for MC Interpolation of AVS Standard .....	200
<i>Lei Deng, Wen Gao, Ming-Zeng Hu, Zhen-Zhou Ji</i>	
Fast Fractal Image Encoder Using Non-overlapped Block Classification and Simplified Isometry Testing Scheme .....	207
<i>Youngjoon Han, Hawik Chung, Hernsoo Hahn</i>	
A Fast Downsizing Video Transcoder Based on H.264/AVC Standard ....	215
<i>Chih-Hung Li, Chung-Neng Wang, Tihao Chiang</i>	
Temporal Error Concealment with Block Boundary Smoothing .....	224
<i>Woong Il Choi, Byeungwoo Jeon</i>	
Spatio-temporally Adaptive Regularization for Enhancement of Motion Compensated Wavelet Coded Video .....	232
<i>Junghoon Jung, Hyunjong Ki, Seongwon Lee, Jeongho Shin, Jinyoung Kang, Joonki Paik</i>	
ROI and FOI Algorithms for Wavelet-Based Video Compression .....	241
<i>Chaoqiang Liu, Tao Xia, Hui Li</i>	
Adaptive Distributed Source Coding for Multi-view Images .....	249
<i>Mehrdad Panahpour Tehrani, Michael Droese, Toshiaki Fujii, Masayuki Tanimoto</i>	
Hybrid Multiple Description Video Coding Using SD/MD Switching .....	257
<i>Il Koo Kim, Nam Ik Cho</i>	
<b>Streaming (II)</b>	
Clusters-Based Distributed Streaming Services with Fault-Tolerant Schemes .....	265
<i>Xiaofei Liao, Hai Jin</i>	
Towards SMIL Document Analysis Using an Algebraic Time Net .....	273
<i>A. Abdelli, M. Daoudi</i>	

MULTFRC-LERD: An Improved Rate Control Scheme for Video Streaming over Wireless . . . . .	282
<i>Xiaolin Tong, Qingming Huang</i>	
Multi-source Media Streaming for the Contents Distribution in a P2P Network . . . . .	290
<i>Sung Yong Lee, Jae Gil Lee, Chang Yeol Choi</i>	
A New Feature for TV Programs: Viewer Participation Through Videoconferencing . . . . .	298
<i>Jukka Rauhalaa, Petri Vuorimaa</i>	
Application Layer Multicast with Proactive Route Maintenance over Redundant Overlay Trees . . . . .	306
<i>Yohei Kunichika, Jiro Katto, Sakae Okubo</i>	
Real-Time Rate Control Via Variable Frame Rate and Quantization Parameters . . . . .	314
<i>Chi-Wah Wong, Oscar C. Au, Raymond Chi-Wing Wong, Hong-Kwai Lam</i>	
The Structure of Logically Hierarchical Cluster for the Distributed Multimedia on Demand . . . . .	323
<i>Xuhui Xiong, Shengsheng Yu, Jingli Zhou</i>	
<b>Watermarking (II)</b>	
Image Forensics Technology for Digital Camera . . . . .	331
<i>Jongweon Kim, Youngbae Byun, Jonguk Choi</i>	
Lossless Data Hiding Based on Histogram Modification of Difference Images . . . . .	340
<i>Sang-Kwang Lee, Young-Ho Suh, Yo-Sung Ho</i>	
A Robust Image Watermarking Scheme to Geometrical Attacks for Embedment of Multibit Information . . . . .	348
<i>Jung-Soo Lee, Whoi-Yul Kim</i>	
Combined Encryption and Watermarking Approaches for Scalable Multimedia Coding . . . . .	356
<i>Feng-Cheng Chang, Hsiang-Cheh Huang, Hsueh-Ming Hang</i>	
Digital Image Watermarking Using Independent Component Analysis . . .	364
<i>Viet Thang Nguyen, Jagdish Chandra Patra</i>	
Clustering-Based Image Retrieval Using Fast Exhaustive Multi-resolution Search Algorithm . . . . .	372
<i>Byung Cheol Song, Kang Wook Chun</i>	



Robust Watermarking for Copyright Protection of 3D Polygonal Model .....	378
<i>Wan-Hyun Cho, Myung-Eun Lee, Hyun Lim, Soon-Young Park</i>	
Digital Video Scrambling Method Using Intra Prediction Mode .....	386
<i>Jinhaeng Ahn, Hiuk Jae Shim, Byeungwoo Jeon, Inchoon Choi</i>	
Watermark Re-synchronization Using Sinusoidal Signals in DT-CWT Domain .....	394
<i>Min-Luen Day, Suh-Yin Lee, I-Chang Jou</i>	
The Undeniable Multi-signature Scheme Suitable for Joint Copyright Protection on Digital Contents .....	402
<i>Sung-Hyun Yun, Hyung-Woo Lee</i>	
A Digital Watermarking Scheme for Personal Image Authentication Using Eigenface .....	410
<i>Chien-Hsung Chen, Long-Wen Chang</i>	
Cryptanalysis of a Chaotic Neural Network Based Multimedia Encryption Scheme .....	418
<i>Chengqing Li, Shujun Li, Dan Zhang, Guanrong Chen</i>	
A Secure Steganographic Method on Wavelet Domain of Palette-Based Images .....	426
<i>Wei Ding, Xiang-Wei Kong, Xin-Gang You, Zi-Ren Wang</i>	
Mapping Energy Video Watermarking Algorithm Based on Compressed Domain .....	433
<i>Lijun Wang, HongXun Yao, ShaoHui Liu, Wen Gao</i>	
A Fragile Image Watermarking Based on Mass and Centroid .....	441
<i>Hui Han, HongXun Yao, ShaoHui Liu, Yan Liu</i>	
<b>Content Production (II)</b>	
MPEG-21 DIA Testbed for Stereoscopic Adaptation of Digital Items ....	449
<i>Hyunsik Sohn, Haksoo Kim, Manbae Kim</i>	
An MPEG-4 Authoring System with Temporal Constraints for Interactive Scene .....	457
<i>Heesun Kim</i>	
A Method of Digital Camera Work Focused on Players and a Ball (– Toward Automatic Contents Production System of Commentary Soccer Video by Digital Shooting –) .....	466
<i>Masahito Kumano, Yasuo Ariki, Kiyoshi Tsukada</i>	
Real-Time Rendering of Watercolor Effects for Virtual Environments ....	474
<i>Su Ian Eugene Lei, Chun-Fa Chang</i>	

Haptic Interaction in Realistic Multimedia Broadcasting .....	482
<i>Jongeun Cha, Jeha Ryu, Seungjun Kim, Seongeun Eom, Byungha Ahn</i>	

Object-Based Stereoscopic Conversion of MPEG-4 Encoded Data .....	491
<i>Manbae Kim, Sanghoon Park, Youngran Cho</i>	

## Applications (II)

Shared Annotation Database for Networked Wearable Augmented Reality System .....	499
<i>Koji Makita, Masayuki Kanbara, Naokazu Yokoya</i>	

A Study on Image Electronic Money Based on Watermarking Technique .....	508
<i>Jung-Soo Lee, Jong-Weon Kim, Kyu-Tae Kim, Jong-Uk Choi, Who-i-Yul Kim</i>	

A Fully Automated Web-Based TV-News System .....	515
<i>P.S. Lai, L.Y. Lai, T.C. Tseng, Y.H. Chen, Hsin-Chia Fu</i>	

An Evolutionary Computing Approach for Mining of Bio-medical Images .....	523
<i>Shashikala Tapaswi, R.C. Joshi</i>	

Movie-Based Multimedia Environment for Programming and Algorithms Design .....	533
<i>Dmitry Vazhenin, Alexander Vazhenin, Nikolay Mirenkov</i>	

An Improvement Algorithm for Accessing Patterns Through Clustering in Interactive VRML Environments .....	542
<i>Damon Shing-Min Liu, Shao-Shin Hung, Ting-Chia Kuo</i>	

## Multimedia Analysis

MPEG-4 Video Retrieval Using Video-Objects and Edge Potential Functions .....	550
<i>Minh-Son Dao, Francesco G.B. DeNatale, Andrea Massa</i>	

A Unified Framework Using Spatial Color Descriptor and Motion-Based Post Refinement for Shot Boundary Detection .....	558
<i>Wei-Ta Chu, Wen-Huang Cheng, Sheng-Fang He, Chia-Wei Wang, Ja-Ling Wu</i>	

HMM-Based Audio Keyword Generation .....	566
<i>Min Xu, Ling-Yu Duan, Jianfei Cai, Liang-Tien Chia, Changsheng Xu, Qi Tian</i>	

Video Scene Segmentation Using Sequential Change Detection . . . . .	575
<i>Zhenyan Li, Hong Lu, Yap-Peng Tan</i>	
Feature Extraction and Evaluation Using Edge Histogram Descriptor in MPEG-7 . . . . .	583
<i>Chee Sun Won</i>	
Automatic Synthesis of Background Music Track Data by Analysis of Video Contents . . . . .	591
<i>Toshio Modegi</i>	
<b>Compression (III)</b>	
Picture Quality Improvement in Low Bit Rate Video Coding Using Block Boundary Classification and Simple Adaptive Filter . . . . .	599
<i>Kee-Koo Kwon, Jin-Suk Ma, Sung-Ho Im, Dong-Sun Lim</i>	
Bit Position Quantization in Scalable Video Coding for Representing Detail of Image . . . . .	607
<i>Hideaki Kimata, Masaki Kitahara, Kazuto Kamikura, Yoshiyuki Yashima</i>	
A Fast Full Search Algorithm for Multiple Reference Images . . . . .	615
<i>Hyun-Soo Kang, Si-Woong Lee, Kook-Yeol Yoo, Jae-Gark Choi</i>	
Preprocessing of Depth and Color Information for Layered Depth Image Coding . . . . .	622
<i>Seung-Uk Yoon, Sung-Yeol Kim, Yo-Sung Ho</i>	
Selective Motion Estimation for Fast Video Encoding . . . . .	630
<i>Sun Young Lee, Yong Ho Cho, Whoiyul Kim, Euee S. Jang</i>	
An Efficient VLSI Architecture of the Sample Interpolation for MPEG-4 Advanced Simple Profile . . . . .	639
<i>Lei Deng, Ming-Zeng Hu, Zhen-Zhou Ji</i>	
Performance Improvement of Vector Quantization by Using Threshold . . .	647
<i>Hung-Yi Chang, Pi-Chung Wang, Rong-Chang Chen, Shuo-Cheng Hu</i>	
An Efficient Object Based Personal Video Coding System . . . . .	655
<i>Cataldo Guaragnella, Tiziana D' Orazio</i>	
Multiview Video Coding Based on Global Motion Model . . . . .	665
<i>Xun Guo, Qingming Huang</i>	
A Novel Rate-Distortion Model for Leaky Prediction Based FGS Video Coding . . . . .	673
<i>Jianhua Wu, Jianfei Cai</i>	

JPEG Quantization Table Design for Photos with Face in Wireless Handset .....	681
<i>Gu-Min Jeong, Jun-Ho Kang, Yong-Su Mun, Doo-Hee Jung</i>	
Effective Drift Reduction Technique for Reduced Bit-Rate Video Adaptation .....	689
<i>June-Sok Lee, Goo-Rak Kwon, Jae-Won Kim, Jae-Yong Lee, Sung-Jea Ko</i>	
On Implementation of a Scalable Wallet-Size Cluster Computing System for Multimedia Applications .....	697
<i>Liang-Teh Lee, Kuan-Ching Li, Chao-Tung Yang, Chia-Ying Tseng, Kang-Yuan Liu, Chih-Hung Hung</i>	
An Adaptive LS-Based Motion Prediction Algorithm for Video Coding .....	705
<i>Min-Cheol Hong, Myung-Sik Yoo, Ji-Hee Kim</i>	
Embedded Packetization Framework for Layered Multiple Description Coding .....	713
<i>Longshe Huo, Qingming Huang, Jianguo Xie</i>	
<b>Watermarking (III)</b>	
Semi-fragile Watermarking Based on Dither Modulation .....	721
<i>Jongweon Kim, Youngbae Byun, Jonguk Choi</i>	
An Adaptive Steganography for Index-Based Images Using Codeword Grouping .....	731
<i>Chin-Chen Chang, Piyu Tsai, Min-Hui Lin</i>	
DH-LZW: Lossless Data Hiding Method in LZW Compression .....	739
<i>Hiuk Jae Shim, Byeungwoo Jeon</i>	
Blind Image Data Hiding in the Wavelet Domain .....	747
<i>Mohsen Ashourian, Yo-Sung Ho</i>	
Image Watermarking Capacity Analysis Using Hopfield Neural Network .....	755
<i>Fan Zhang, Hongbin Zhang</i>	
Efficient Algorithms in Determining JPEG-Effective Watermark Coefficients .....	763
<i>Chih-Wei Tang, Hsueh-Ming Hang</i>	
A Fragile Watermarking Based on Knapsack Problem .....	771
<i>Hui Han, HongXun Yao, ShaoHui Liu, Yan Liu</i>	
<b>Author Index</b> .....	777

Advances in Multimedia Information Processing - PCM  
2004

5th Pacific Rim Conference on Multimedia, Tokyo, Japan,  
November 30 - December 3, 2004, Proceedings, Part I  
Aizawa, K.; Nakamura, Y.; Satoh, S. (Eds.)

2005, XXXVI, 667 p., Softcover

ISBN: 978-3-540-23974-1