

Table of Contents

Invited Talks

Slow Intelligence Systems (Extended Abstract)	1
<i>Shi-Kuo Chang</i>	
Media 2.0 – The New Media Revolution? (Extended Abstract)	2
<i>Shipeng Li</i>	
Designing a Comprehensive Visual Recognition System (Extended Abstract)	3
<i>Hartmut Neven</i>	

Regular Papers

3D Modeling

Surface Reconstruction from Images Using a Variational Formulation ...	4
<i>Liuxin Zhang and Yunde Jia</i>	
Layer-Constraint-Based Visibility for Volumetric Multi-view Reconstruction	15
<i>Yumo Yang, Liuxin Zhang, and Yunde Jia</i>	
Two Stages Stereo Dense Matching Algorithm for 3D Skin Micro-surface Reconstruction	25
<i>Qian Zhang and TaegKeun Whangbo</i>	
Safe Polyhedral Visual Hulls	35
<i>Guojun Chen, Huanhuan Su, Jie Jiang, and Wei Wu</i>	

Advanced Video Coding and Adaptation

Enhanced Temporal Error Concealment for 1Seg Video Broadcasting ...	45
<i>Jun Wang, Yichun Tang, and Satoshi Goto</i>	
User-Centered Video Quality Assessment for Scalable Video Coding of H.264/AVC Standard	55
<i>Wei Song, Dian Tjondronegoro, and Salahuddin Azad</i>	

Face, Gesture and Applications

Subjective Experiments on Gender and Ethnicity Recognition from Different Face Representations	66
<i>Yuxiao Hu, Yun Fu, Usman Tariq, and Thomas S. Huang</i>	

Facial Parameters and Their Influence on Subjective Impression in the Context of Keyframe Extraction from Home Video Contents	76
<i>Uwe Kowalik, Go Irie, Yasuhiko Miyazaki, and Akira Kojima</i>	
Characterizing Virtual Populations in Massively Multiplayer Online Role-Playing Games	87
<i>Daniel Pittman and Chris GauthierDickey</i>	
Browsing Large Personal Multimedia Archives in a Lean-Back Environment	98
<i>Cathal Gurrin, Hyowon Lee, Niamh Caprani, ZhenXing Zhang, Noel O'Connor, and Denise Carthy</i>	

Image Processing

Automatic Image Inpainting by Heuristic Texture and Structure Completion	110
<i>Xiaowu Chen and Fang Xu</i>	
Multispectral and Panchromatic Images Fusion by Adaptive PCNN	120
<i>Yong Li, Ke Wang, and Da-ke Chen</i>	
A Dual Binary Image Watermarking Based on Wavelet Domain and Pixel Distribution Features	130
<i>Wei Xia, Hongwei Lu, and Yizhu Zhao</i>	
PSF-Constraints Based Iterative Blind Deconvolution Method for Image Deblurring	141
<i>Xuan Mo, Jun Jiao, and Chen Shen</i>	

Image Retrieval

Face Image Retrieval across Age Variation Using Relevance Feedback ...	152
<i>Naoko Nitta, Atsushi Usui, and Noboru Babaguchi</i>	
Visual Reranking with Local Learning Consistency	163
<i>Xinmei Tian, Linjun Yang, Xiuqing Wu, and Xian-Sheng Hua</i>	
Social Image Search with Diverse Relevance Ranking	174
<i>Kuiyuan Yang, Meng Wang, Xian-Sheng Hua, and Hong-Jiang Zhang</i>	
View Context: A 3D Model Feature for Retrieval	185
<i>Bo Li and Henry Johan</i>	
Scene Location Guide by Image-Based Retrieval	196
<i>I-Hong Zhuo, Tsuhan Chen, and D.T. Lee</i>	

Learning Landmarks by Exploiting Social Media	207
<i>Chia-Kai Liang, Yu-Ting Hsieh, Tien-Jung Chuang, Yin Wang, Ming-Fang Weng, and Yung-Yu Chuang</i>	

Discovering Class-Specific Informative Patches and Its Application in Landmark Characterization	218
<i>Shenghua Gao, Xiangang Cheng, and Liang-Tien Chia</i>	

Learning Semantic Concepts

Mid-Level Concept Learning with Visual Contextual Ontologies and Probabilistic Inference for Image Annotation	229
<i>Yuee Liu, Jinglan Zhang, Dian Tjondronegoro, Shlomo Geva, and Zhengrong Li</i>	

A Color Saliency Model for Salient Objects Detection in Natural Scenes	240
<i>Minghui Tian, Shouhong Wan, and Lihua Yue</i>	

Generating Visual Concept Network from Large-Scale Weakly-Tagged Images	251
<i>Chunlei Yang, Hangzai Luo, and Jianping Fan</i>	

Automatic Image Annotation with Cooperation of Concept-Specific and Universal Visual Vocabularies	262
<i>Yanjie Wang, Xiabi Liu, and Yunde Jia</i>	

Weak Metric Learning for Feature Fusion towards Perception-Inspired Object Recognition	273
<i>Xiong Li, Xu Zhao, Yun Fu, and Yuncai Liu</i>	

Media Analysis and Modeling

The Persian Linguistic Based Audio-Visual Data Corpus, AVA II, Considering Coarticulation	284
<i>Azam Bastanfard, Maryam Fazel, Alireza Abdi Kelishami, and Mohammad Aghaahmadi</i>	

Variational Color Image Segmentation via Chromaticity-Brightness Decomposition	295
<i>Zheng Bao, Yajun Liu, Yaxin Peng, and Guixu Zhang</i>	

Image Matching Based on Representative Local Descriptors	303
<i>Jian Hou, Naiming Qi, and Jianxin Kang</i>	

Stereoscopic Visual Attention Model for 3D Video	314
<i>Yun Zhang, Gangyi Jiang, Mei Yu, and Ken Chen</i>	

Non-intrusive Speech Quality Assessment with Support Vector Regression	325
<i>Manish Narwaria, Weisi Lin, Ian Vince McLoughlin, Sabu Emmanuel, and Chia Liang Tien</i>	
Semantic Video Concepts	
Semantic User Modelling for Personal News Video Retrieval	336
<i>Frank Hopfgartner and Joemon M. Jose</i>	
TV News Story Segmentation Based on Semantic Coherence and Content Similarity	347
<i>Hemant Misra, Frank Hopfgartner, Anuj Goyal, P. Punitha, and Joemon M. Jose</i>	
Query-Based Video Event Definition Using Rough Set Theory and High-Dimensional Representation	358
<i>Kimiaki Shirahama, Chieri Sugihara, and Kuniaki Uehara</i>	
Story-Based Retrieval by Learning and Measuring the Concept-Based and Content-Based Similarity	370
<i>Yuxin Peng and Jianguo Xiao</i>	
Camera Take Reconstruction	379
<i>Maia Zaharieva, Matthias Zeppelzauer, Christian Breiteneder, and Dalibor Mitrović</i>	
Semantic Based Adaptive Movie Summarisation	389
<i>Reede Ren, Hemant Misra, and Joemon M. Jose</i>	
Towards Annotation of Video as Part of Search	400
<i>Martin Halvey and Joemon M. Jose</i>	
Human Action Recognition in Videos Using Hybrid Motion Features ...	411
<i>Si Liu, Jing Liu, Tianzhu Zhang, and Hanqing Lu</i>	
Bag of Spatio-temporal Synonym Sets for Human Action Recognition	422
<i>Lin Pang, Juan Cao, Junbo Guo, Shouxun Lin, and Yan Song</i>	
Tracking and Motion Analysis	
A Novel Trajectory Clustering Approach for Motion Segmentation	433
<i>Matthias Zeppelzauer, Maia Zaharieva, Dalibor Mitrović, and Christian Breiteneder</i>	
New Optical Flow Approach for Motion Segmentation Based on Gamma Distribution	444
<i>Cheolkon Jung, Licheng Jiao, and Maoguo Gong</i>	

Reducing Frame Rate for Object Tracking	454
<i>Pavel Korshunov and Wei Tsang Ooi</i>	

Special Session Papers

Video Analysis and Event Recognition

A Study on Sampling Strategies in Space-Time Domain for Recognition Applications	465
<i>Mert Dikmen, Dennis J. Lin, Andrey Del Pozo, Liang Liang Cao, Yun Fu, and Thomas S. Huang</i>	
Fire Surveillance Method Based on Quaternionic Wavelet Features	477
<i>Zhou Yu, Yi Xu, and Xiaokang Yang</i>	
Object Tracking and Local Appearance Capturing in a Remote Scene Video Surveillance System with Two Cameras	489
<i>Wenming Yang, Fei Zhou, and Qingmin Liao</i>	
Dual Phase Learning for Large Scale Video Gait Recognition	500
<i>Jialie Shen, HweeHwa Pang, Dacheng Tao, and Xuelong Li</i>	
Semantic Concept Detection for User-Generated Video Content Using a Refined Image Folksonomy	511
<i>Hyun-seok Min, Sihyoung Lee, Wesley De Neve, and Yong Man Ro</i>	
Semantic Entity-Relationship Model for Large-Scale Multimedia News Exploration and Recommendation	522
<i>Hangzai Luo, Peng Cai, Wei Gong, and Jianping Fan</i>	

Cross-X Multimedia Mining in Large Scale

PageRank with Text Similarity and Video Near-Duplicate Constraints for News Story Re-ranking	533
<i>Xiaomeng Wu, Ichiro Ide, and Shin'ichi Satoh</i>	
Learning Vocabulary-Based Hashing with AdaBoost	545
<i>Yingyu Liang, Jianmin Li, and Bo Zhang</i>	
Mediapedia: Mining Web Knowledge to Construct Multimedia Encyclopedia	556
<i>Richang Hong, Jinhui Tang, Zheng-Jun Zha, Zhiping Luo, and Tat-Seng Chua</i>	
Sensing Geographical Impact Factor of Multimedia News Events for Localized Retrieval and News Filtering	567
<i>Xu Zhang, Jin-Tao Li, Yong-Dong Zhang, and Shi-Yong Neo</i>	

Travel Photo and Video Summarization with Cross-Media Correlation and Mutual Influence	577
<i>Wei-Ta Chu, Che-Cheng Lin, and Jen-Yu Yu</i>	

Mobile Computing and Applications

An Augmented Reality Tourist Guide on Your Mobile Devices	588
<i>Maha El Choubassi, Oscar Nestares, Yi Wu, Igor Kozintsev, and Horst Haussecker</i>	
Transfer Regression Model for Indoor 3D Location Estimation	603
<i>Junfa Liu, Yiqiang Chen, and Yadong Zhang</i>	
Personalized Sports Video Customization for Mobile Devices	614
<i>Chao Liang, Yu Jiang, Jian Cheng, Changsheng Xu, Xiaowei Luo, Jinqiao Wang, Yu Fu, Hanqing Lu, and Jian Ma</i>	
3D Thumbnails for Mobile Media Browser Interface with Autostereoscopic Displays	626
<i>R. Bertan Gundogdu, Yeliz Yigit, and Tolga Capin</i>	

Short Papers

Video Scene Segmentation Using Time Constraint Dominant-Set Clustering	637
<i>Xianglin Zeng, Xiaoqin Zhang, Weiming Hu, and Wanqing Li</i>	
Automatic Nipple Detection Using Shape and Statistical Skin Color Information	644
<i>Yue Wang, Jun Li, HeeLin Wang, and ZuJun Hou</i>	
Asymmetric Bayesian Learning for Image Retrieval with Relevance Feedback	650
<i>Jun Wu and Mingyu Lu</i>	
Automatic Visualization of Story Clusters in TV Series Summary	656
<i>Johannes Sasongko and Dian Tjondronegoro</i>	
From Image Hashing to Video Hashing	662
<i>Li Weng and Bart Preneel</i>	
Which Tags Are Related to Visual Content?	669
<i>Yinghai Zhao, Zheng-Jun Zha, Shanshan Li, and Xiuqing Wu</i>	
Anchor Shot Detection with Diverse Style Backgrounds Based on Spatial-Temporal Slice Analysis	676
<i>Fuguang Zheng, Shijin Li, Hao Wu, and Jun Feng</i>	

The SLDSRC Rate Control Scheme for H.264	683
<i>Jianguo Jiang, Wenju Zhang, and Man Xuan</i>	
Adaptively Adjusted Gaussian Mixture Models for Surveillance Applications.....	689
<i>Tianci Huang, Xiangzhong Fang, Jingbang Qiu, and Takeshi Ikenaga</i>	
Estimating Poses of World's Photos with Geographic Metadata	695
<i>Zhiping Luo, Haojie Li, Jinhui Tang, Richang Hong, and Tat-Seng Chua</i>	
Discriminative Image Hashing Based on Region of Interest	701
<i>Yang Ou, Chul Sur, and Kyung Hyune Rhee</i>	
Transformational Breathing between Present and Past: Virtual Exhibition System of the Mao-Kung Ting	707
<i>Chun-Ko Hsieh, Xin Tong, Yi-Ping Hung, Chia-Ping Chen, Ju-Chun Ko, Meng-Chieh Yu, Han-Hung Lin, Szu-Wei Wu, Yi-Yu Chung, Liang-Chun Lin, Ming-Sui Lee, Chu-Song Chen, Jiaping Wang, Quo-Ping Lin, and I-Ling Liu</i>	
Learning Cooking Techniques from YouTube	713
<i>Guangda Li, Richang Hong, Yan-Tao Zheng, Shuicheng Yan, and Tat-Seng Chua</i>	
Adaptive Server Bandwidth Allocation for Multi-channel P2P Live Streaming	719
<i>Chen Tang, Lifeng Sun, and Shiqiang Yang</i>	
Feature Subspace Selection for Efficient Video Retrieval.....	725
<i>Anuj Goyal, Reede Ren, and Joemon M. Jose</i>	
A Novel Retrieval Framework Using Classification, Feature Selection and Indexing Structure	731
<i>Yue Feng, Thierry Urruty, and Joemon M. Jose</i>	
Fully Utilized and Low Design Effort Architecture for H.264/AVC Intra Predictor Generation	737
<i>Yiqing Huang, Qin Liu, and Takeshi Ikenaga</i>	
A Database Approach for Expressive Modeling and Efficient Querying of Visual Information	743
<i>Ahmed Azough, Alexandre Delteil, Mohand-Said Hacid, and Fabien DeMarchi</i>	
A Multiple Instance Approach for Keyword-Based Retrieval in Un-annotated Image Database	749
<i>Jun Jiao, Chen Shen, Bo Dai, and Xuan Mo</i>	

On the Advantages of the Use of Bitstream Extraction for Video
Summary Generation 755
Luis Herranz and José M. Martínez

Image Clustering via Sparse Representation 761
Jun Jiao, Xuan Mo, and Chen Shen

A Parameterized Representation for the Cartoon Sample Space 767
Yuehu Liu, Yuanqi Su, Yu Shao, and Daitao Jia

Demo Session Papers

Enhancing Seeker-Bars of Video Players with Dominant Color Rivers ... 773
Klaus Schoeffmann and Laszlo Boeszörményi

AdVR: Linking Ad Video with Products or Service 776
Shi Chen, Jinqiao Wang, Bo Wang, Ling-yu Duan, Qi Tian, and Hanqin Lu

Searching and Recommending Sports Content on Mobile Devices 779
David Scott, Cathal Gurrin, Dag Johansen, and Håvard Johansen

Extended CBIR via Learning Semantics of Query Image 782
Chuanghua Gui, Jing Liu, Changsheng Xu, and Hanqing Lu

A Gesture-Based Personal Archive Browser Prototype 786
ZhenXing Zhang, Cathal Gurrin, Hyowon Lee, and Denise Carthy

E-learning Web, Printing and Multimedia Format Generation Using
Independent XML Technology 789
Alberto González Téllez

Dynamic Video Collage 793
Yan Wang, Tao Mei, Jingdong Wang, and Xian-Sheng Hua

VDictionary: Automatically Generate Visual Dictionary via
Wikimedias 796
*Yanling Wu, Mei Wang, Guangda Li, Zhiping Luo,
Tat-Seng Chua, and Xumin Liu*

Video Reference: A Video Question Answering Engine 799
*Lei Gao, Guangda Li, Yan-Tao Zheng, Richang Hong, and
Tat-Seng Chua*

Author Index 803