

*The First International Conference on
Internet Multimedia Computing and Service*
ICIMCS 2009

November 23–25, 2009

Kunming, Yunnan, China

Organized by

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ACM SIGMM Beijing Chapter

Welcome Message from Conference Chairs

Welcome to First International Conference on Internet Multimedia Computing and Service (ICIMCS'2009). The conference is organized by ACM SIGMM Beijing Chapter and held from November 23 to 25 in Kunming, Yunnan, China. ICIMCS'2009 focuses on a wide variety of key issues and investigates new approaches to tackle problems arising from the fast-growing multimedia data on internet and users' diverse requirement for multimedia service.

ICIMCS'2009 is a forum for researchers from the academia and the industry, professionals, standard developers to exchange information on the state-of-the-art of internet multimedia information processing technologies and applications, as well as to identify the emerging research topics and define the future of multimedia information computing from internet. We received 70 papers and only 36 oral presentations are accepted. Two special sessions were also organized by the leading young scientists in this area. We kindly acknowledge the great support provided in the reviewing of submissions by the program committee members. The many useful comments provided by the reviewing process must have been very valuable for the authors' work. We would also like to take this opportunity to acknowledge the National laboratory of Pattern Recognition, Institute of Automation/Chinese Academy of Sciences, Yunnan University, China, for their dutiful logistical support. Finally we would like to thank ACM SIGMM Beijing chapter and National Science Foundation of China for sponsoring this event.

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Technical Program Overview

Date	Time	Event
November 23	8:00 – 8:40	Registration
	8:40 – 9:00	Opening Ceremony
	9:00 – 10:00	Keynote address 1 (Prof. Changwen Chen) Semantic Image and Video Adaptation for Mobile Device Access
	10:00 – 10:20	Tea Break
	10:20 – 12:00	Oral session 1 Multimedia Search and Mining (I)
	12:00 – 13:30	Lunch
	13:30 – 15:10	Oral session 2 Object Detection, Tracking, and Recognition
	15:10 – 15:30	Tea Break
	15:30 – 17:10	Oral session 3 Multimedia Content Analysis and Understanding
	17:40 -	Banquet
November 24	8:30 – 9:30	Keynote address 2 (Dr. Yong Rui) Learning Concepts by Modeling Relationships
	9:30 – 9:50	Tea Break
	9:50 – 11:30	Oral session 4 Multimedia Search and Mining (II)
	11:30 – 13:00	Lunch
	13:00 – 14:40	Oral session 5 Multimedia Applications and Services (I)

	14:40 – 16:20	Special session 1 (Chair: Dr. Yan Liu) Women in Multimedia
	16:20 – 16:40	Tea Break
	16:40 – 18:20	Oral session 6 Video Analysis / Motion Analysis
	18:30 -	Dinner
November 25	8:30 – 10:10	Special session 2 (Chair: Dr. Guangyu Zhu) Personalized Content Analysis for Multimedia Service
	10:10 – 10:30	Tea Break
	10:30 – 12:10	Oral session 7 Multimedia Applications and Services (II)
	12:10 – 13:30	Lunch
	Afternoon	Visit Yunnan University

Keynote 1

Semantic Image and Video Adaptation for Mobile Device Access

Abstract: Recent proliferation of mobile devices with video capture and display capabilities has resulted in a paradigm shift trends in video coding, processing, and adaptation. One major challenge in mobile media access is the adaptation of digital image and video for mobile devices with limited display sizes. Intelligent adaptation based on content semantics can provide much better adaptation than simple resolution reduction. This talk will present examples in semantic adaptation of image and video for mobile device access based on the understanding of media semantics. Some detailed analysis and simulation results will be shown to demonstrate that innovative approaches can be designed to meet the technical challenges in future networked mobile media entertainment and applications.



Biography: Chang Wen Chen is a Professor of Computer Science and Engineering at the University at Buffalo, State University of New York. He has been Allen Henry Endow Chair Professor of Electrical and Computer Engineering at the Florida Institute of Technology from July 2003 to December 2007. He was on the faculty of Electrical Engineering Department at the University of Rochester from 1992 to 1996, on the faculty of Electrical and Computer Engineering Department at the University of Missouri-Columbia from 1996 to 2003.

Currently, he is the Editor-in-Chief for IEEE Trans. Circuits and Systems for Video Technology. He has been an Associate Editor for several IEEE Transactions and Journals. He has served as Conference Chair for several major IEEE and SPIE conferences related to multimedia video communications and signal processing. His current research interests include high definition digital entertainment, reliable and secure multimedia communications over mobile wireless channels; digital video coding, processing, analysis, and embedded implementation, distributed source coding and digital signal processing for communications; and collaborative signal processing and data aggregation for sensor networks. His research is supported by NSF, DARPA, Air Force, NASA, Whitaker Foundation, Intel, Kodak and Huawei.

He received his BS from University of Science and Technology of China in 1983, MSEE from University of Southern California in 1986, and Ph.D. from University of Illinois at Urbana-Champaign in 1992. He was elected an IEEE Fellow for his contributions in digital image and video processing, analysis, and communications, and elected an SPIE Fellow for his contributions in electronic imaging and visual communications.

Keynote 2

Learning Concepts by Modeling Relationships

Abstract: Supporting multimedia search has emerged as an important research topic. There are three paradigms on the research spectrum that ranges from the least automatic to the most automatic. On the far left end, there is the pure manual labeling paradigm that labels multimedia content, e.g., images and video clips, manually with text labels and then use text search to search multimedia content indirectly. On the far right end, there is the content-based search paradigm that can be fully automatic by using low-level features from multimedia analysis. In recent years, a third paradigm emerged which is in the middle: the annotation paradigm. Once the concept models are trained, this paradigm can automatically detect/annotate concepts in unseen multimedia content. This talk looks into this annotation paradigm. Specifically, this talk argues that within the annotation paradigm, the relationship-based annotation approach outperforms other existing annotation approaches, because individual concepts are considered jointly instead of independently. We will use within concept relationship, between concept relationship and blind concept relationship to illustrate the idea.



Biography: Yong Rui is a Director of Microsoft China R&D Group from 2006 to present. From 1999 – 2006, Dr. Rui was leading the Multimedia Collaboration team at Microsoft Research, Redmond, USA.

Dr. Rui contributes significantly to image and video analysis, indexing, and retrieval — from the fundamental framework, to algorithms, and to practical solutions. According to Google Scholar citation, two of Dr. Rui's papers have been each cited 1,000+ times and 12 other papers have each been cited 100+ times. His most distinctive contribution is in establishing a paradigm-shifting relevance feedback framework in image indexing and retrieval. Dr. Rui holds 40 issued and pending US and international patents in the above research fields.

Dr. Rui is an Associate Editor of ACM Trans. on Multimedia Computing, Communication and Applications (TOMCCAP), IEEE Trans. on Circuits and Systems for Video Technologies (CSVT), and is on the editorial board of IEEE Multimedia Magazine. He was an Associate Editor of IEEE Trans. on Multimedia (2004-2008), ACM/Springer Multimedia Systems Journal (2004-2006), and International Journal of Multimedia Tools and Applications (2004-2006). He also serves on the Advisory Board of IEEE Trans. on Automation Science and Engineering. Dr. Rui is a Senior Member of IEEE and a Distinguished Member of ACM.

Technical Program

Monday November 23, 2009

8:00 – 8:40 Registration

8:40 - 9:00 Opening Ceremony

9:00 - 10:00 Keynote 1 (Keynote chair: Changsheng Xu)

- **Semantic Image and Video Adaptation for Mobile Device Access**

Chang Wen Chen (State University of New York)

10:00 – 10:20 Tea Break

10:20 – 12:00 Session 1: Multimedia Search and Mining (I)
(Session chair: Hongxun Yao, Harbin Institute of Technology)

- **Semantic annotation formalism of video-conferencing documents**
Ameni Yengui (MIRACL), Mahmoud Neji (MIRACL)
- **Scalable feature-based video retrieval for mobile devices**
Marleen Morbee (Ghent University, Belgium), Vladan Velisavljevic (Deutsche Telekom Laboratories, Berlin, Germany), Marta Mrak (University of Surrey, Centre for Communication System Research, Guildford, UK), Wilfried Philips (Ghent University, Belgium)
- **Visual Block Link Analysis for Image Re-ranking**
Wengang Zhou (University of Science and Technology of China), Qi Tian (Microsoft, China), Houqiang Li (University of Science and Technology of China)
- **Hidden-Concept Driven Image Decomposition Towards Semi-Supervised Multi-label Image Annotation**
Bing-Kun Bao (National University of Singapore), Teng Li (Dept. of EE, KAIST), Shuicheng Yan (National University of Singapore)

12:00 – 13:30 Lunch

13:30 – 15:10 Session 2: Object Detection, Tracking and Recognition
(Session chair: Shuicheng Yan, National University of Singapore)

- **Object class recognition with Supervised Nonlinear Neighborhood Embedding of visual words**
Xian-Hua Han (Ritsumeikan University), Yen-Wei Chen (Ritsumeikan University), Xiang Ruan (Omron Corporation)
- **Spatial Pyramid based Histogram Representation for Visual Tracking with Partial Occlusion**
Lili Ma (Institute of Automation, Chinese Academy of Sciences), Jinqiao Wang, Jing Liu,

Hanqing Lu

- **Boosted Forest for Human Detection**

Chengli Xie (Institute of Automation, Chinese Academy of Sciences), Jinqiao Wang, Hanqing Lu

- **An Improved Tracking Algorithm in Crowded Scenes and Dynamic Background**

Yingying Yue (YunNan University), Yun Gao (High Performance Computing Center of Yunnan University), Xuejie Zhang (yunnan university)

- **Precise Eye Detection on Frontal View Face Image**

Zhiming Qian (Yunnan university), Yonghui Tian, Dan Xu

15:10 – 15:30 Tea Break

**15:30 – 17:10 Session 3: Multimedia Content Analysis and Understanding
(Session chair: Hong Wu, Univ. of Elect. Sci. and Tech. of China)**

- **An Efficient Cache Strategy for Improving Images' Quality**

Hua-Pu Cheng (Tamkang University), Tin-Yu Wu , Wei-Tsong Lee

- **Towards gesture modeling by vision**

Raja Gadhoun (Higher Institute of Computer S), Mahmoud Neji (Fsegs sfax)

- **Microscopic Image Segmentation Based on Color Pixels Classification**

Mira Park (University of Newcastle), Jesse S. Jin, Min Xu, W.S.Felix Wong, Suhuai Luo, Yue Cui

- **Parallel Scene Perception on Various Blurry Images**

Le Dong (UESTC), Ebroul Izquierdo (Queen Mary)

- **Simplified DCT based segmentation with efficient coding of computer screen images..73**

S.Ebenezer Juliet (Sundaranar University), D.Jemi Florinabel, Dr.V.Sadasivam

- **A Lie Group based Gaussian Mixture Model Distance Measure for Multimedia Comparison**

Liyu Gong (HUST), Tianjiang Wang, Yan Yu, Fang Liu, Xiangen Hu

- **Steganalysis on Echo Hiding Based on Combinatorial High Order Statistics**

Yunlu Wang (Hangzhou Dianzi University), Xueyi Ye, Zema Zhao

17:40: Banquet

Tuesday November 24, 2009

8:30 – 9:30 Keynote 2 (Keynote chair: Changsheng Xu)

- **Learning Concepts by Modeling Relationships**

Yong Rui (Microsoft China)

9:30 – 9:50 Tea Break

9:50 – 11:30 Session 4: Multimedia Search and Mining (II)
(Session chair: Zhenfeng Zhu, Beijing Jiaotong University)

- **A Simple and Efficient Video Image Clustering Algorithm for Person Specific Query and Image Retrieval**
Md. Shafaeat Hossain (Louisiana Tech University), Khandaker A. Rahman, Md.Hasanuzzaman (university of dhaka), Vir V. Phoha (Louisiana Tech University)
- **Incorporating Concept Ontology for Multi-level Image Indexing**
Roger Wong (Hong Kong Baptist University), Clement Leung
- **Texture Based Satellite Image Indexing By Local Binary Pattern Correlograms**
Sahbi Bahroun (URISA Sup'Com Tunisia), Zied Belhadj, Nozha Boujemaa (INRIA)
- **High-level Concept Annotation using Ontology and Probabilistic Inference**
Yuee Liu (QUT), Jinglan Zhang, Zhengrong Li, Dian Tjondronegor
- **Applying pLSA to Region-based Image Categorization with Soft Vector Quantization**
Hong Wu (Uestc), Yongguo Liu, Mao Ye

11:30 – 13:00 Lunch

13:00 – 14:40 Session 5: Multimedia Applications and Services (I)
(Session chair: Chin-Feng Lai, National Chen Kung University)

- **Thai Fruit Recognition System (TFRS)**
Chomtip Pornpanomchai (Mahidol University), Khomkwan Srikeaw, Voranun Harnprasert, Kamonwan Promnurakkit
- **Ad-Smell: Advertising Movie With a Simple Olfactory Display**
Chomtip Pornpanomchai (Mahidol University), Khanti Benjathanachat, Suradej Prechaphuet, Jaruwat Supapol
- **Interactive Sketch Template Creation from Realistic Pictures for Tracing Applications**
Shiming Ge (Nokia Research Center, Beijing), Hao Wang, Kongqiao Wang, Lei Xu
- **Automatic 3D Face Texture Mapping Framework from Single Image**
X. C. He (The University of Hong Kong), S.C. Yuk, K. P. Chow, K.-Y. Kenneth Wong, R.H. Y. Chung
- **What goes where? Designing interactive large public display applications for mobile device interaction**
Nima Kaviani (University of British Columbia), Matthias Finke, Sidney Fels, Rodger Lea, Hua Wang

14:40 – 16:20 Special Session 1: Women in Multimedia
(Chair: Yan Liu, The Hong Kong Polytechnic University)

- **Three-Dimensional Facial Feature Points Matching Based on a Combined Support Vector Machine**
Hongjing Ma (Northwest University), Detong Zhang, Jun Feng
- **Automatic Online Labeling Images via Co-active-learning**
Yanyun Qu (Xiamen University), Lifeng Liu, Yuan Xie, Zejian Yuan
- **Fast Algorithm for Multi-Reference and Variable Block Size Motion Estimation in H.264/AVC**
Weipeng Ma (Institute of Acoustics, Chinese Academy of Sciences), Shuyuan Yang, Chaoke Pei, Li Gao, Yimang Lin
- **Bidirectional Visible Neighborhood Preserving Embedding**
Yang Liu (The Hong Kong Polytechnic University), Yan Liu, Keith C.C. Chan

16:20 – 16:40 Tea Break

16:40 – 18:20 Session 6: Video Analysis / Motion Analysis
(Session chair: Xian-Hua Han, Ritsumeikan University)

- **Motion attention based frame-level bit allocation scheme for H.264**
Liquan Shen (Shanghai University), Zhi Liu, Zhaoyang Zhang, Hongbo Yan
- **Video Shot Segmentation Using Graph-based Dominant-Set Clustering**
Li Li (Institute of Automation, Chinese Academy of Sciences), Xianglin Zeng, Xi Li, Weiming Hu, Pengfei Zhu
- **Discovering Tactics in Broadcast Sports Videos with Trajectories**
Yi Zhang (Institute of Automation, Chinese Academy of Sciences), Guanyu Zhu, Hanqing Lu
- **Human Action Recognition In Videos Using Motion Impression Image**
Si Liu (Institute of Automation, Chinese Academy of Sciences), Jing Liu, Tianzhu Zhang, Hanqing Lu
- **Generation of Size Constrained Video Storyboard using Spanning Tree**
Partha Mohanta (Indian Statistical Institute), Sanjoy Saha (Jadavpur University), Bhabatosh Chanda
- **Bit-Rate and Computational Complexity Scalability Design for Texture-Synthesis Based Video Coding**
Xiaowei Sun (Beijing University of Technology), Baocai Yin, Yunhui Shi

18:30 Dinner

Wednesday November 25, 2009

8:30 – 10:10 Special Session 2: Personalized Content Analysis for Multimedia Service (Chair: Guangyu Zhu, National University of Singapore)

- **Personalized Multimedia Alert Service of Fall Event of Ageing in Place**
Xinguo Yu (Institute of Infocomm Research), Panachit Kittipanya-Ngam, How Lung Eng
- **Hand Tracking and Application in Map Navigation**
Yikai Fang (Nokia Research Center), Xiujuan Chai, Lei Xu, Kongqiao Wang
- **Affective Content Analysis by Mid-Level Representation in Multiple Modalities**
Min Xu (University of Newcastle), Suhuai Luo, Jesse S. Jin, Mira Park
- **A Generic Approach to Classify Sports Video Shots and Its Application in Event Detection**
Lingfang Li (Institute of Computing, Chinese Academy of Sciences), Ling-Yu Duan, Qingming Huang, Jun Du, Wen Gao
- **VisualCor System: Search Actor Correlations in TV Series**
Kun Yuan (Harbin Institute of Technology), Rongrong Ji, Hongxun Yao, Xiaoshuai Sun, Pengfei Xu, Xianming Liu

10:10 – 10:30 Tea Break

**10:30 – 12:10 Session 7: Multimedia Applications and Services (II)
(Session chair: Min Xu, University of Newcastle)**

- **Color Correction for Mobile Panorama Imaging**
Yingen Xiong (Nokia Research Center), Kari Pulli
- **Analysis of Design Parameters on the Performance of SC-CP Communication System**
Aqeel Ahmad (NUST PAKistan), Shoab A. Khan
- **OSGI-Based P2P Multimedia Resource Sharing System**
Chen-Ying Liu (National Cheng Kung University), Chin-Feng Lai, Ren-Hung Hwang, Jen-Wen Ding, Yueh-Min Huang
- **Image Segmentation for Silicosis Diagnosis in Grid Environment**
Ran Zheng, Hai Jin (Huazhong Univ. of Sci. & Tech.), Qin Zhang, Liang Zhang
- **Extended Rights Vocabulary for Authoring Tools Interoperability**
Yuan-Kang Wang (Waseda University), Akiko Seki (Nihon University), Wataru Kameyama
- **Personalized Online Video Recommendation by Neighborhood Score Propagation Based Global Ranking**
Chunxi Liu (Institute of Computing, Chinese Academy of Sciences), Shuqiang Jiang, Qingming Huang

12:10 – 13:30 Lunch

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