

# **2009 First International Conference on Advances in Multimedia**

## **(MMEDIA 2009)**

**Colmar, France  
20 – 25 July 2009**



**IEEE Catalog Number: CFP0923H-PRT  
ISBN: 978-1-4244-4471-7**

# 2009 First International Conference on Advances in Multimedia

# MMEDIA 2009

## Table of Contents

### MMEDIA 1: Multimedia Applications

Audio Compression Using a Munich and Cambridge Morlet Wavelet .....	1
<i>Khalil Abid and Kais Ouni</i>	
An Adaptive Mechanism for Multipath Video Streaming over Video Distribution Network (VDN) .....	6
<i>Majd Ghareeb, Cesar Viho, and Adlen Ksentini</i>	
Contextual Metadata in Practice .....	12
<i>Martin Svensson</i>	
Integrating Lecture Recordings with Social Networks .....	18
<i>Patrick Fox, Johannes Emden, Nicolas Neubauer, and Oliver Vornberger</i>	

### MMEDIA 2: Multimedia Services

Video Sequence Deinterlacing Using Intensity Gradient Filter and Median Filter with Texture Detection .....	23
<i>Kunhwa Kang, Joohyeok Kim, and Jechang Jeong</i>	
Virtualization as a Strategy for Maintaining Future Access to Multimedia Content .....	29
<i>Knut Holmqvist, Till Halbach, and Thor Kristoffersen</i>	
Advanced Bilinear Image Interpolation Based on Edge Features .....	33
<i>Heechang Kim, Sangjun Park, Jin Wang, Yonghoon Kim, and Jechang Jeong</i>	
S3: A Spectral and Spatial Sharpness Measure .....	37
<i>Cuong T. Vu and Damon M. Chandler</i>	

## **MMEDIA 3: Multimedia Content and Modeling**

The Visualization and Animation of Algorithmically Generated 3D Models Using Open Source Software .....	44
<i>Nick Rowe</i>	
Collaborative Multimedia Content Caching Algorithms for Mobile Ad-Hoc Networks .....	50
<i>Y. Abdelmalek and T. Saadawi</i>	
A New Adaptive Linear Interpolation Algorithm Using Pattern Weight Based on Inverse Gradient .....	58
<i>Joohyeok Kim and Jechang Jeong</i>	
Requirements for an Adaptive Multimedia Presentation System with Contextual Supplemental Support Media .....	62
<i>Suzy Cutts, Philip Davies, David Newell, and Nick Rowe</i>	

## **MMEDIA 4: Multimedia Control & Management, Multimedia ontology, Mobile and Ubiquitous Multimedia**

A Drift-Reduced Hierarchical Wavelet Coding Scheme for Scalable Video Transmissions .....	68
<i>Roya Choupani, Stephan Wong, and Mehmet R. Tolun</i>	
Generation and Maintenance of Semantic Metadata for Personal Multimedia Document Management .....	74
<i>Annett Mitschick and Klaus Meißner</i>	
Streaming Mobile Multimedia Optimization for Video-Conferencing Scenarios .....	80
<i>David Esteban Inés, Kazutoshi Fujikawa, Eiji Kawai, and Hideki Sunahara</i>	
Rapidly Building Multimedia Management Interfaces for Ubiquitous Computing Services .....	86
<i>Ichiro Satoh</i>	

## **MMEDIA 5: Fundamentals in Multimedia I**

Fast Mode Decision Algorithm Using Efficient Block Skip Techniques for H.264 P Slices .....	92
<i>Youngsub Jo, Jongmin You, Wonkyun Kim, and Jechang Jeong</i>	
Improving QoS in P2P Video Streaming .....	98
<i>Majed Alhaisoni, Mohammed Ghanbari, and Antonio Liotta</i>	
Optimal Layer-Based Unequal Error Protection for Robust JPEG 2000 Images and Video Transmission over Wireless Channels .....	104
<i>Max Agueh and Henoc Soude</i>	
Prefetching Optimization in P2P VoD Applications .....	110
<i>Yifeng He and Ling Guan</i>	

## **MMEDIA 6: Fundamentals in Multimedia II**

Network Scanning on Multi Function Device .....	116
<i>Dong-Hoon Lee and Sung-Gi Min</i>	
A Design of Multi-threaded Shader Processor with Dual-Phase Pipeline	
Architecture .....	121
<i>Kwang-Yeob Lee, Tae-Ryoung Park, Jae-Chang Kwak, and Yong-Seo Koo</i>	
A Motion Vector Coding Scheme Based on Bottom-Up Merging Procedure .....	125
<i>Shou-Yi Tseng and Che-How Mak</i>	
Parameterized User-Centered Design for Interacting with Multimedia	
Repositories .....	130
<i>Ayman Moghnieh, Sergio Sayago, Ernesto Arroyo, Gasper Sopi, and Josep Blat</i>	

## **MMEDIA 7: Fundamentals in Multimedia III and Multimedia Content-Based Retrieval and Analysis I**

An Enhanced Lenient Merging Scheme for H.264 Variable Block Size	
Selection .....	136
<i>Ihab Amer, Rana Hamed, Wael Badawy, Graham Jullien, and James W. Haslett</i>	
Synthetic Video Generation with Camera Motion Patterns to Evaluate Sprite	
Generation .....	140
<i>Yi Chen and Ramazan S. Aygün</i>	
Computer Vision Method in Music Interaction .....	146
<i>Manitsaris Sotirios and Pekos Georgios</i>	
Content-Based Classification and Segmentation of Mixed-Type Audio	
by Using MPEG-7 Features .....	152
<i>Ebru Doğan, Mustafa Sert, and Adnan Yazıcı</i>	

## **MMEDIA 8: Work In Progress**

Non-sequential Multimedia Caching .....	158
<i>Anita Sobe and Laszlo Böszörmenyi</i>	
Evaluation Platform for a Multimedia Content Suggestion System .....	162
<i>Virginie Galtier and Erwan Baynaud</i>	
Work in Progress: Visualizing a Semantic Search in a Room-Based	
Knowledge Space .....	166
<i>Nadine Ludwig</i>	

## **MMEDIA 9: Multimedia Content-Based Retrieval and Analysis II**

Database Kernel for Image Retrieval .....	169
<i>Cosmin Stoica Spahiu, Cristian Marian Mihaescu, Liana Stanescu,</i>	
<i>Dan Burdescu, and Marius Brezovan</i>	
Hixosfs_Music: A Filesystem in Linux Kernel Space for Musical Files .....	174
<i>Nicola Corriero and Vittoria Cozza</i>	

Color Harmonies and Contrasts Search in Art Image Collections .....	180
<i>Krassimira Ivanova and Peter Stanchev</i>	
Automatic Music Genre Classification Using a Hierarchical Clustering and a Language Model Approach .....	188
<i>Thibault Langlois and Gonçalo Marques</i>	
A Hierarchical Classification Scheme for Semantic Image Annotation .....	194
<i>Nicolas Tsapatsoulis</i>	

#### **Author Index**