

PROGRAMME EC-VIP-MC 2003



**4th EURASIP Conference focused on Video / Image
Processing and Multimedia Communications**

2-5 July 2003

**Faculty of Electrical Engineering and Computing (FER)
Zagreb, CROATIA**



EC-VIP-MC 2003 GENERAL INFORMATION

4th EURASIP Conference focused on Video / Image Processing and Multimedia Communications, EC-VIP-MC 2003, is organised by:

- *Department of Radiocommunications and Microwave Engineering, Faculty of Electrical Engineering and Computing, University of Zagreb*
- *The European Association for Speech, Signal and Image Processing - EURASIP*

EC-VIP-MC 2003 Conference will be held at the Faculty of Electrical Engineering and Computing (FER); Address: Unska 3, Zagreb, CROATIA

EC-VIP-MC 2003 Conference takes place under the sponsorship of:

- *EURASIP*



EC-VIP-MC 2003 Conference takes place under the co-sponsorship of:

- *IEEE Region 8*
- *IEEE Croatia Section*
- *Ministry of Science and Technology of the Republic of Croatia*
- *University of Zagreb*
- *Faculty of Electrical Engineering and Computing in Zagreb*

EC-VIP-MC 2003 Conference GENERAL SPONSOR:

- *MOBIS ELECTRONIC*



EC-VIP-MC 2003 Conference is supported by:

- *CROATIAN INSTITUTE OF TELECOMMUNICATIONS*
- *ELEKTROMAGIC*
- *STORM COMPUTERS*
- *INFONET PROJEKT*
- *MICRO-LINK*
- *CROATIAN NATIONAL TOURIST BOARD*
- *ZAGREB TOURIST BOARD*
- *KRAŠ*

The logo for HZT, with the letters "HZT" in a bold, green, sans-serif font.

The logo for ELEKTROMAGIC, featuring a red stylized graphic of three curved lines to the left of the word "ELEKTROMAGIC" in a bold, red, sans-serif font.

The logo for STORM COMPUTERS, with the word "STORM" in a large, bold, blue, sans-serif font and "COMPUTERS" in a smaller, blue, sans-serif font below it.



The logo for MICRO-LINK, with the word "MICRO-LINK" in a bold, green, sans-serif font.

The logo for CROATIA, featuring a red square above the word "CROATIA" in a bold, blue, sans-serif font.



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PROGRAMME AT A GLANCE

Wednesday, 2 July 2003

08:00 - 10:00 Registration			
HALL A	HALL B	HALL C	HALL D
10:00 - 10:30 Opening of the EC-VIP-MC 2003 conference			
10:30 - 12:30 OPENING SESSION: KEYNOTE SPEECHES			
12:30 - 13:30 Lunch Break			
13:30 - 15:00 SESSION: IMAGE AND VIDEO CODING - 1	13:30 - 14:30 INVITED LECTURE	13:30 - 15:00 SESSION: IMAGE AND VIDEO INDEXING AND RETRIEVAL - 1	13:30 - 15:00 SESSION: SIGNAL PROCESSING - 1
15:00 - 15:30 Coffee Break			
15:30 - 17:00 SESSION: IMAGE AND VIDEO CODING - 2		15:30 - 17:00 SESSION: IMAGE AND VIDEO INDEXING AND RETRIEVAL - 2	15:30 - 17:00 SESSION: SIGNAL PROCESSING - 2

18:00 - 20:00 GUIDED ZAGREB SIGHTSEEING (included in the registration fee) <u>Meeting Point:</u> FER, Main Entrance, 18:00
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Thursday, 3 July 2003

09:00 - 20:00 GUIDED TOUR TO NATIONAL PARK "PLITVICE LAKES" (included in the registration fee) <u>Meeting Point:</u> FER, Main Entrance, 09:00
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PROGRAMME AT A GLANCE

Friday, 4 July 2003

09:00 - 10:00 Registration			
HALL A	HALL B	HALL C	HALL D
10:00 - 11:30 SESSION: IMAGE AND VIDEO CODING - 3	10:00 - 11:30 SESSION: FACE DETECTION - 1	10:00 - 11:30 SESSION: IMAGE AND VIDEO INDEXING AND RETRIEVAL - 3	10:00 - 11:30 SESSION: SPEECH AND AUDIO PROCESSING - 1
11:30 - 12:00 Coffee Break			
12:00 - 13:30 SESSION: WAVELETS CODING - 1	12:00 - 13:30 SESSION: FACE DETECTION - 2	12:00 - 13:30 SESSION: SIGNAL PROCESSING - 3	12:00 - 13:30 SESSION: SPEECH AND AUDIO PROCESSING - 2
13:30 - 14:30 Lunch Break			
14:30 - 16:00 SESSION: WAVELETS CODING - 2	14:30 - 16:00 SESSION: OBJECT DETECTION	14:30 - 16:00 SESSION: MULTIMEDIA COMMUNICATIONS AND NETWORKING - 1	14:30 - 16:00 SESSION: SPEECH AND AUDIO PROCESSING - 3
20:00 CONFERENCE GALA DINNER (included in the registration fee) <u>Meeting Point: Hotel "Opera" - Hall "Opera" (17th floor), 20:00</u>			

Saturday, 5 July 2003

09:00 - 10:00 Registration			
HALL A	HALL B	HALL C	HALL D
10:00 - 11:30 SESSION: WATERMARKING		10:00 - 11:30 SESSION: MULTIMEDIA APPLICATIONS	10:00 - 11:30 SESSION: MULTIMEDIA COMMUNICATIONS AND NETWORKING - 2
11:30 - 12:00 Coffee Break			
			12:00 - 13:30 SESSION: MULTIMEDIA COMMUNICATIONS AND NETWORKING - 3
End of the EC-VIP-MC 2003 conference			

Wednesday, 2 July 2003

08:00-10:00 **Registration**

HALL A

Wednesday, 2 July 2003

10:00-10:30 **Opening of the EC-VIP-MC 2003 conference**

Professor Branka Zovko-Cihlar, University of Zagreb, CROATIA

Welcome Speech

10:30-12:30 **OPENING SESSION: KEYNOTE SPEECHES**

Session Chair: **Branka Zovko-Cihlar, Kalman Fazekas**

Professor Anthony G. Constantinides, First President of the EURASIP, Imperial College London, UNITED KINGDOM

On Contours, Corners and Cats: The Human Visual System and Image Processing

Professor Touradj Ebrahimi, EPFL, SWITZERLAND

Novel Frontiers in Multimedia Communications - New Media and Interfaces

Professor K. R. Rao, University of Texas at Arlington, USA

An Overview of H.264/MPEG-4 Part 10

Professor Branka Zovko-Cihlar, University of Zagreb, CROATIA

Multimedia in Croatian Digital Video Broadcasting

12:30-13:30 **Lunch Break**

13:30-15:00 **SESSION: IMAGE AND VIDEO CODING - 1**

Session Chair: **Sonja Grgic**

Yalon Roterman, Moshe Porat; ISRAEL

Progressive Image Coding using Regional Color Correlation

Wenxian Yang, King N. Ngan, Jeongeun Lim,

Kwanghoon Sohn; SINGAPORE / AUSTRALIA / KOREA

Edge-Preserving Regularization of Disparity and Motion Fields

Monia Discepoli, Ivan Gerace, Roberta Pandolfi; ITALY

An Edge-Preserving High-Resolution Image Reconstruction

Juan Ignacio Larrauri, Evaristo Kahoraho; SPAIN

A New Method for Image Coding in Computer Vision

G. Farhadi; IRAN

A Hybrid Image Compression Scheme using Block-Based Fractal Coding and DCT

**Korakot Prachumrak, Akira Hiramatsu, Takayasu Fuchida,
Hirofumi Nakamura, Sadayuki Murashima; JAPAN**
Lossless Fractal Image Coding

15:00-15:30 **Coffee Break**

15:30-17:00 **SESSION: IMAGE AND VIDEO CODING - 2**

Session Chair: **Kalman Fazekas**

Yonghun Kim, Taihong Yi; KOREA
Efficient Post-Processing for Block-Based Compressed Video

Tomas Fryza, Stanislav Hanus; CZECH REPUBLIC
Relation Between Character of Real Video Sequences and 3D-DCT Compression

Nora Szekely, Bela Pataki; HUNGARY
Detecting Lesions in a Mammogram

Francisco J. Sanchez-Marin; MEXICO
Image Registration of Gray-Scale Images using the Hotelling Transform

Przemyslaw Korohoda, Jacek A. Pietrzyk; POLAND
Video Processing for Modelling of Temperature Changes
in the Initially Cooled Forearm of the Hemodialyzed Person

Filip Rooms, Wilfried Philips, Patrick Van Oostveldt; BELGIUM
Integrated Approach for Estimation and Restoration
of Photon-limited Images based on Steerable Pyramids

18:00-20:00 **GUIDED ZAGREB SIGHTSEEING**
(included in the registration fee)
Meeting Point: FER, Main Entrance, 18:00

HALL B **Wednesday, 2 July 2003**

13:30-14:30 **INVITED LECTURE**

Session Chair: **Branka Zovko-Cihlar**

Professor Jiri Jan, Brno University of Technology, CZECH REPUBLIC
Signal and Image Data Processing in Ultrasonic Imaging

15:00-15:30 **Coffee Break**

18:00-20:00 **GUIDED ZAGREB SIGHTSEEING**
(included in the registration fee)
Meeting Point: FER, Main Entrance, 18:00

13:30-15:00 **SESSION: IMAGE AND VIDEO INDEXING AND RETRIEVAL - 1**

Session Chair: **Panos Liatsis**

Ebroul Izquierdo; UNITED KINGDOM

Successive Approximations for Scalable Content
and Content Descriptors in Multimedia Applications

Alberto Amato, Vincenzo Di Lecce; ITALY

Edge Detection Techniques in Image Retrieval: The Semantic Meaning of Edge

S. Chastel; GERMANY

Querying for Different Similar Images using Maximum Independent Sets of a Graph

Abdul Ghafoor, Rao Naveed Iqbal, Shoab Khan; PAKISTAN

Robust Image Matching Algorithm

P. Liatsis, C. Kammerer; UNITED KINGDOM

Robust Parameter Estimation in Lane Following
using a Committee of Local Expert Networks

Petr Bures; CZECH REPUBLIC

Long Distance Lane Boundary Visualisation on Curved Roads with a Slope

15:00-15:30 **Coffee Break**

15:30-17:00 **SESSION: IMAGE AND VIDEO INDEXING AND RETRIEVAL - 2**

Session Chair: **Panos Liatsis**

L. Konyha, B. Enyedi, S. M. Tran, K. Fazekas; HUNGARY

Content-Based Mesh Generation Algorithm

S. Chindaro, K. Sirlantzis, F. Deravi; UNITED KINGDOM

Colour Space Fusion for Texture Recognition

Ioannis Paraskevas, Edward Chilton; UNITED KINGDOM

Audio Classification using Acoustic Images for Retrieval from Multimedia Databases

Falah E. Alsaqre, Yuan Baozong; CHINA

Moving Object Segmentation from Video Sequences: An Edge Approach

J.M. Fuertes, M. Lucena, N. Perez de la Blanca, N. Ruiz; SPAIN

Objects Matching Combining Color and Shape

18:00-20:00 **GUIDED ZAGREB SIGHTSEEING**
(included in the registration fee)
Meeting Point: FER, Main Entrance, 18:00

13:30-15:00 **SESSION: SIGNAL PROCESSING - 1**

Session Chair: **Bogdan Smolka**

Paul Dan Cristea, Rodica Tuduce; ROMANIA

Signal Processing of Genomic Information: Mitochondrial Genomic Signals of Hominidae

Ryszard Stasinski; POLAND

Universal Fast Fourier Transform Algorithm for Prime Data Vector Sizes

J. Turan, P. Filo, P. Farkas, D. Siskovicova; SLOVAK REPUBLIC

Parameter Estimation Based on Hough Transform

**R. Lukac, K.N. Plataniotis, B. Smolka, A.N. Venetsanopoulos;
SLOVAK REPUBLIC / CANADA / POLAND**

Weighted Vector Median Optimization

Vladimir Britanak; SLOVAK REPUBLIC

A Unified Fast Computation of the Evenly and Oddly Stacked MDCT/MDST

**R. Lukac, B. Smolka, K.N. Plataniotis, A.N. Venetsanopoulos;
SLOVAK REPUBLIC / POLAND / CANADA**

Generalized Entropy Vector Filters

15:00-15:30 **Coffee Break**

15:30-17:00 **SESSION: SIGNAL PROCESSING - 2**

Session Chair: **Bogdan Smolka**

Constantin Popescu, Dan Noje, Barnabas Bede, Ioan Mang; ROMANIA

A Group Signature Scheme with Revocation

B. Smolka, R. Lukac; POLAND / GREECE

Fast Similarity Based Impulsive Noise Reduction Technique for Color Images

Th. Zahariadis, K. Pramataris, S. Voliotis, N. Zervos; GREECE

Digital Signal Processing on a Fully Programmable Platform

Wlodzimierz Pogribny, Beata Marciniak; POLAND

Convolutions in Mixed Formats Oriented on Multiprocessors Systems

B. Smolka, R. Lukac; POLAND / GREECE

Color Image Enhancement Based on Nonparametric Density Estimation

18:00-20:00 **GUIDED ZAGREB SIGHTSEEING**
(included in the registration fee)
Meeting Point: FER, Main Entrance, 18:00

Thursday, 3 July 2003

09:00-20:00

GUIDED TOUR TO NATIONAL PARK "PLITVICE LAKES"

(included in the registration fee)

Meeting Point: FER, Main Entrance, 09:00

Friday, 4 July 2003

09:00-10:00

Registration

HALL A

Friday, 4 July 2003

10:00-11:30

SESSION: IMAGE AND VIDEO CODING - 3

Session Chair: **K.R. Rao**

Marta Mrak, Detlev Marpe, Sonja Grgic; CROATIA / GERMANY

Comparison of Context-Based Adaptive Binary Arithmetic Coders in Video Compression

Joze Mohorko, Zarko Cucej; SLOVENIA

Optimization of 16 Bit Fix-Point Multiplication in Fast DCT

Implemented on TMS320C2000 DSP

Yunxian Zhou, Denis Gračanin; USA

Improvements of Video Coding over Wireless Channel
and Analysis of Error Probability and Rate Control

Tomas Kratochvíl, Tomas Fryza; CZECH REPUBLIC

Video Compression Hardware Implementation using Programmable Media Processor

Kresimir Duracic, Hrvoje Mlinaric, Mario Kovac; CROATIA

Optimization Methods for MPEG-4 Algorithms in Multimedia Applications Running on PDA

Manish Arora, Shashi Kant, Korada Ramkishor; INDIA

Design and Implementation of a Real Time High

Quality DV Digital Video Software Encoder

Nadjib Achir, Kave Salamatian, Guy Pujolle; FRANCE

Object-Based Unequal Loss Protection for Multi-Object Video Delivery

11:30-12:00

Coffee Break

12:00-13:30

SESSION: WAVELETS CODING - 1

Session Chair: **Zarko Cucej**

Humberto Ochoa, K. R. Rao; USA / MEXICO

A Modified Hybrid DWT-SVD Image-Coding System
(HDWTSVD) for Monochromatic Images

Mathias Johanson; SWEDEN

A Scalable Video Compression Algorithm for Real-time Internet Applications

Radu Dobrescu, Matei Dobrescu; ROMANIA
MDL Based Algorithm for Packet-DWT Tree Pruning

Carol Rus, Corneliu Rusu; ROMANIA / FINLAND
3D Surfaces Synthesis using the Wavelet Transform

R. Vargic; SLOVAK REPUBLIC
Wavelet-Based Compression of Segmented Images

Chun-Hsien Chou, Kuo-Cheng Liu, Po-Yu Lin; TAIWAN
An Error-Resilient Video Codec Based on Perceptual 3-D SPIHT Algorithm

13:30-14:30 **Lunch Break**

14:30-16:00 **SESSION: WAVELETS CODING - 2**

Session Chair: **Zarko Cucej**

Nikola Sprljan, Ebroul Izquierdo; CROATIA / UNITED KINGDOM
New Perspectives on Image Compression using
a Cartoon - Texture Decomposition Model

Dusan Gleich, Peter Planinsic, Zarko Cucej; SLOVENIA
Low Bitrate Video Coding using Wavelet Transform

N. Patuck, D. McLernon; UNITED KINGDOM
Wavelet Filter Selection by Clustering of Image Measures

Byong-Ki Lee, Yo-Sung Ho; KOREA
Rate-Distortion Optimized Zerotree Image Coding using Wavelet Transforms

Sreco Plevel, Tomaz Javornik, Gorazd Kandus, Roman Trobec; SLOVENIA
Adaptive Data Mapping of Wavelet Compressed Images in MIMO Systems

V. Couturier-Doux, J. Lienard, B. Conq, P. Gallay; FRANCE
Efficient Implementation of Discrete Wavelet Multitone in DSL Communications

Josip Knezovic, Mario Kovac; CROATIA
Effects of Scaling and Residual Mapping Parameters on Lossless Compression of Images

20:00 **CONFERENCE GALA DINNER**
(included in the registration fee)
Meeting Point: Hotel "Opera" - Hall "Opera" (17th floor), 20:00

HALL B **Friday, 4 July 2003**

10:00-11:30 **SESSION: FACE DETECTION - 1**

Session Chair: **Peter Peer**

Manoj Seshadrinathan, Jezekiel Ben-Arie; USA
Pose Invariant Face Detection

Ben-Zion Shaick, Leonid Yaroslavsky; ISRAEL
Accelerating Face Detection by means of Image Segmentation

Brett A McLindin; AUSTRALIA

Baselining Illumination Variables for Improved Facial Recognition System Performance

Prag Sharma, Richard B. Reilly; IRELAND

A Colour Face Image Database for Benchmarking of Automatic Face Detection Algorithms

Yeunghak Lee, Taihong Yi; KOREA

3D Face Recognition using Multiple Features for Local Depth Information

11:30-12:00 **Coffee Break**

12:00-13:30 **SESSION: FACE DETECTION - 2**

Session Chair: **Ben-Zion Shaick**

Manoj Seshadrinathan, Jezekiel Ben-Arie; USA

Fast Recognition of Multiple Faces using MCM

**J. Sunde, M.A. Butavicius, I. Graves, D. Hemming, V. Ivancevic,
R. Johnson, A.K. Kaine, B.A. McLindin, K. Meaney; AUSTRALIA**

A Methodology for Evaluating the Operational Effectiveness
of Facial Recognition Systems

Jure Kovac, Peter Peer, Franc Solina; SLOVENIA

2D versus 3D Colour Space Face Detection

B.A. McLindin, M.A. Butavicius, K. Meaney; AUSTRALIA

Gallery Image Effects on Facial Recognition Systems

13:30-14:30 **Lunch Break**

14:30-16:00 **SESSION: OBJECT DETECTION**

Session Chair: **Basil G. Mertzios**

D.A. Karras, B.G. Mertzios; GREECE

On Edge Detection in MRI using the Wavelet Transform
and Unsupervised Neural Networks

Shyamsundar Rajaram, Jezekiel Ben-Arie, Dayan Manohar Sivalingam; USA

Labeling of Human Body Parts

Vesna Zeljkovic, Zeljen Trpovski, Vojin Senk; YUGOSLAVIA

Improved Illumination Independent Moving Object Detection
in Real World Video Sequences

Naresh Sarwabhotla, Manoj Ramachandran; INDIA

Improved Radar Object Identification using Wavelet Transform and ART-2 Neural Network

20:00 **CONFERENCE GALA DINNER**
(included in the registration fee)
Meeting Point: Hotel "Opera" - Hall "Opera" (17th floor), 20:00

10:00-11:30 **SESSION: IMAGE AND VIDEO INDEXING AND RETRIEVAL - 3**

Session Chair: **Ebroul Izquierdo**

Dusan Heric, Bozidar Potocnik; SLOVENIA

An Image Segmentation Tool (IST)

AAW Smith, MK Teal, P Voles; UNITED KINGDOM

The Statistical Characterization of the Sea for the Segmentation of Maritime Images

Camillo Jorge Santos Oliveira, Arnaldo de Albuquerque Araujo; BRASIL

Separating Images Collected in the World Wide Web
into Two Semantic Classes: Photographs and Graphics

Piera Palma, Luca Petraglia, Gennaro Petraglia; ITALY

Virtual Image : Keyframe or Visual Icon?

Attila Hanis, Tamas Sziranyi; HUNGARY

Measuring the Motion Similarity in Video Indexing

Goran Zlodi, Ivo Maroevic; CROATIA

Thesaurus as a Tool for Image Indexing and Retrieval in the Field of Cultural Heritage

11:30-12:00 **Coffee Break**

12:00-13:30 **SESSION: SIGNAL PROCESSING - 3**

Session Chair: **Paul Dan Cristea**

Christodoulos Voutriaridis, Yiannis S. Boutalis, Basil G. Mertzios; GREECE

Ridge Polynomial Networks in Pattern Recognition

Wlodzimierz Pogribny, Tomasz Marciniak; POLAND

Use of Nonlinear Operations in Digital Systems for Identification of Location Signals

M. El Hassouni, H. Cherifi; FRANCE

HOS-Based Filtering Scheme for Stereo Image Compression

S. Rital, H. Cherifi; FRANCE

Similarity Hypergraph Representation for Impulsive Noise Reduction

Nikola Mrvac, Stanislav Bolanca, Lidija Mandic; CROATIA

The Influence of Increasing the Tone Value on the Printing Reproduction Quality

13:30-14:30 **Lunch Break**

14:30-16:00 **SESSION: MULTIMEDIA COMMUNICATIONS AND NETWORKING - 1**

Session Chair: **Pavol Podhradsky**

Ivan Kotuliak, Tulin Atmaca, Pavol Podhradsky; SLOVAK REPUBLIC / FRANCE
End-to-end Performance in All-Optical Environment

V. Zagursky, A. Riekstinch; LATVIA
Speech Signal Reconstruction for Real-time Voice Transmission over the Internet

Tomislav Drempevic, Tomica Rihtarec, Damir Bakic; CROATIA
Next Generation Networks Architecture for Multimedia Applications

Koutarou Kumagai, Masahiro Tsunoyama, Hiroei Imai, Ikuo Ishii; JAPAN
An Evaluation Method for Network Systems based on Delay Jitter Analysis

Daniel Z. Lenardic, Branka Zovko-Cihlar, Mislav Grgic; CROATIA
Analysis of Effects of Network Latency on Multimedia
Data Transfer in Broadband Communications Networks

Drazen Kedmenec, Vedran Kedmenec, Mario Gerencir; CROATIA
Issues Concerning Usability of 802.11 Networks for Real-Time Service Transport

20:00 **CONFERENCE GALA DINNER**
(included in the registration fee)
Meeting Point: Hotel "Opera" - Hall "Opera" (17th floor), 20:00

HALL D **Friday, 4 July 2003**

10:00-11:30 **SESSION: SPEECH AND AUDIO PROCESSING - 1**

Session Chair: **Gregor Rozinaj**

Delphine Derrien; FRANCE
Efficient Quantization Algorithms for High Quality Low Bit Rate Transmission of Speech

Valery Zagursky, Aigars Riekstinch, Ivars Zarumba; LATVIA
Testing the Methods of Sound Signal Compression

Abedin Vahedian; IRAN
Identification of Sound Source in Machine Vision Sequences using Audio Information

G. Madre, E.H. Baghious, S. Azou, G. Burel; FRANCE
Linear Predictive Speech Coding using Fermat Number Transform

Radmio Peic; CROATIA
A Speech Recognition Algorithm based on the Features of Croatian Language

E. Dellandrea, P. Makris, M. Boiron, N. Vincent; FRANCE
Multiresolution for the Detection of Xiphoidal Sounds in Noisy Medical Audio Signals

11:30-12:00 **Coffee Break**

12:00-13:30 **SESSION: SPEECH AND AUDIO PROCESSING - 2**

Session Chair: **Gregor Rozinaj**

Renaud Seguier, Nicolas Cladel; FRANCE

Multiobjectives Genetic Snakes: Application on Audio-Visual Speech Recognition

M. Rodriguez-Alvarez, F. Rojas, M. Salmeron, I. Rojas, E. Ros, C.G. Puntonet; SPAIN

Blind Source Separation of Speech Signals based on an Ica Geometric Procedure

Janez Zibert, Sanda Martincic-Ipsic, Ivo Ipsic, France Mihelic; SLOVENIA / CROATIA

Bilingual Speech Recognition of Slovenian and Croatian Weather Forecasts

Shogo Matsuoka, Shin'ichi Takagi, Akihisa Kodate, Hideyoshi Tominaga; JAPAN

Music Copyright Management by Audio Separation Method on Content Distribution

Xie Lei, Jiang Dongmei, Ilse Ravyse, Werner Verhelst, Hichem Sahli,

Velina Slavova, Zhao Rongchun; CHINA / BELGIUM / BULGARIA

Context Dependent Viseme Models for Voice Driven Animation

Martin J Russell, Philip J B Jackson, Michael L P Wong; UNITED KINGDOM

Development of Articulatory-Based Multi-Level Segmental

HMMs for Phonetic Classification in ASR

13:30-14:30 **Lunch Break**

14:30-16:00 **SESSION: SPEECH AND AUDIO PROCESSING - 3**

Session Chair: **Branka Medved Rogina**

Juraj Kacur, Juraj Frank, Gregor Rozinaj; SLOVAK REPUBLIC

Speech Detection in the Noisy Environment using Wavelet Transform

E. Jafer, A. E. Mahdi; IRELAND

Wavelet-based Voiced/Unvoiced Classification Algorithm

Pavel Gaura; CZECH REPUBLIC

Czech Speech Synthesizer Popokatepetl Based on Word Corpus

Danijel Domazet, Mario Kovac; CROATIA

Advanced Software Implementation of MPEG-4 AAC Audio Encoder

Andrzej Szwabe, Czeslaw Jedrzejek; POLAND

Perceptually Transparent Audio Compression based on a Variable Bit Rate AAC Coder

Milos Cernak, Gregor Rozinaj; SLOVAK REPUBLIC

Forward Masking Phenomenon in Concatenative Speech Synthesis

20:00 **CONFERENCE GALA DINNER**

(included in the registration fee)

Meeting Point: Hotel "Opera" - Hall "Opera" (17th floor), 20:00

Saturday, 5 July 2003

09:00-10:00

Registration

HALL A

Saturday, 5 July 2003

10:00-11:30

SESSION: WATERMARKING

Session Chair: **Dimitar Taskovski**

Yulin Wang, Alan Pearmain; UNITED KINGDOM

Robust Data Hiding in MPEG-2 Video Against Transcoding

Dimitar Taskovski, Sofija Bogdanova, Momcilo Bogdanov; MACEDONIA

Blind Watermarking via Low Frequency Component Modification

S. Manoharan; NEW ZEALAND

Towards Robust Steganography using T-Codes

Chun-Hsien Chou, Kuo-Cheng Liu; TAIWAN

An Oblivious and Robust Watermarking Scheme using Perceptual Model

Jean-Noel Campaner, Hocine Cherifi; FRANCE

Picture Quality Evaluation Strategy using a Watermarking Technique

Anna Usakova, Jana Kotuliakova; SLOVAK REPUBLIC

Using of WHT in the Detection Process of the Watermarking Systems

HALL C

Saturday, 5 July 2003

10:00-11:30

SESSION: MULTIMEDIA APPLICATIONS

Session Chair: **Tomislav Kos**

Bozidar Klicek, Marijana Zekic-Susac; CROATIA

Architecture of an Experimental Web Multimedia Educational Repository

Jan Turan, Lubos Ovsenik, Jan Turan, jr.; SLOVAK REPUBLIC / GERMANY

Web-Based Multimedia Courseware: Applied Photonics

Radu Radescu, Adrian Dumitru; ROMANIA

Integrating a Flash Application using Action Scripts
in a Data Exchange System on the Internet

Alcina Prata, Nuno Correia; PORTUGAL

How to Produce Small-Sized CD-ROM Multimedia Applications - Simple Guidelines

Ahmed O. Abdul Salam, Tarik Ozkul; UNITED ARAB EMIRATES

Multimedia Methods for Web-Based Engineering Labs

Predrag Valozic; CROATIA

Multimedia Electronic Workplace Learning Kernel

Nuno Correia, Alcina Prata; PORTUGAL

Multimedia Application with Interactive and Generative
Digital Animation for Performance Arts

**Rima Abdallah, Abdelmalek Benzekri, Ali El Hajj,
Ibrahim Moukarzel; FRANCE / LEBANON**

An Improved WBT Model for Enhanced Interoperable and Reusable Environment

HALL D

Saturday, 5 July 2003

10:00-11:30 **SESSION: MULTIMEDIA COMMUNICATIONS AND NETWORKING - 2**

Session Chair: **Branka Zovko-Cihlar**

Ivan Vilovic, Branka Zovko-Cihlar; CROATIA

Performance of the Bluetooth-Based WPAN for Multimedia Communication

C.M. Calafate, M.P. Malumbres; SPAIN

Testing the H.264 Error-Resilience on Wireless Ad-Hoc Networks

Winton Afric, Branka Zovko-Cihlar, Sonja Grgic; CROATIA

Interference in Direct Spread Sequence Mobile Communication System

Mihael Kaiser, Zarko Cucej; SLOVENIA

Artificial Intelligence in Modern Telecommunication Systems: Analysis and Implementation

V. Zagursky, A. Riekstinch; LATVIA

Network Parameter Estimation for Voice Data Transmission in Virtual Private Networks

Bruce Denby, Sid-Ahmed Hariti; FRANCE

Towards a Software-Radio Enabled Broadcast Media Navigator

11:30-12:00 **Coffee Break**

12:00-13:30 **SESSION: MULTIMEDIA COMMUNICATIONS AND NETWORKING - 3**

Session Chair: **Branka Zovko-Cihlar**

Hakan Yilmaz, Bulent Sankur; TURKEY

Internet over Digital Video Broadcast: Performance Issues

Tomislav Kos, Mislav Grgic, Lidija Mandic; CROATIA

CATV Broadband Technologies

Yu Chen, Qionghai Dai; CHINA

A Feedback Control Model for Resource Management on Streaming Media Servers

Francesco Palmieri; ITALY

Improving the Performance in Multimedia Streaming
Networks: A Differentiated Service Approach

Tomas Kratochvil; CZECH REPUBLIC

Digital Video Broadcasting Channel Encoding and Decoding Simulation

Ivan Milak, Branka Zovko-Cihlar, Tomislav Kos; AUSTRIA / CROATIA

Synthesis of Output Filter Unit for Terrestrial Digital Video Broadcasting

SOCIAL PROGRAMME

Wednesday, 2 July 2003, 18:00-20:00

Guided Zagreb Sightseeing

(included in the registration fee)

Meeting Point: FER, Main Entrance, 18:00

Thursday, 3 July 2003, 09:00-20:00

Guided Tour to National Park "Plitvice Lakes"

(included in the registration fee)

Meeting Point: FER, Main Entrance, 09:00

Friday, 4 July 2003, 20:00

Conference Gala Dinner

(included in the registration fee)

Meeting Point: Hotel "Opera" - Hall "Opera" (17th floor), 20:00