IWSSIP 2006

13th International Conference on Systems, Signals and Image Processing

COST 292 SPECIAL SESSION
Semantic Multimodal Analysis of Digital Media

21-23 September 2006, Budapest, Hungary

PROGRAMME

IWSSIP 2006

13th International Conference on Systems, Signals and
Image Processing

COST 292 SPECIAL SESSION

Semantic Multimodal Analysis of Digital Media

are co-organized by

Budapest University of Technology and Economics
*Technical University of Ko*šice

**IWSSIP 2006 takes place under the general sponsorship
of:**

Rohde & Schwarz

IWSSIP 2006 takes place under the co-sponsorship of:

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(EURASIP)
IEEE Signal Processing Society
The IEE
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PREFACE

It is our great honour to welcome you to the **13th International Conference on Systems, Signals and Image Processing (IWSSIP 2006).** Welcome to Budapest.

The IWSSIP 2006 was co-organized by Budapest University of Technology and Economics, Faculty of Electrical Engineering and Informatics, Department of Broadband Infocommunications and Electromagnetic Theory and Technical University of Košice, Department of Electronics and Multimedia Telecommunications, with the support of EURASIP, IEEE and IEE.

As incorporated in its name, IWSSIP used to be a workshop meeting, however, it was evolved to a conference in the course of time. The Programme Committee has therefore decided to change its official designation, but, considering the historical values exhibited by this event, the traditional abbreviation shall be maintained further on.

The conference involves a Special Session for COST 292 Action: Semantic Multimodal Analysis of Digital Media. This Special Session contributes significantly to the success and to the scientific level of the Conference.

The aim of this conference is, like in the previous 12 years, to bring together perspective authors and experts from all over the world and in particular from Europe, and to present and discuss recent advantages related to the signal theory, multimedia technology, communication theory and their applications, and to demonstrate state-of-the-art systems.

About 160 paper proposals arrived from more than 20 countries of the world, from the American continent to Japan. The International Programme Committee after the review process has selected little more than 100 submitted papers for oral and poster presentation.

It is our great pleasure to thank all members of the organizing and programme committees whose help and efforts have been essential for the organization of IWSSIP 2006. We are expressing our special gratitude to the local organizers and first of all, to Balázs Enyedi for his excellent and enthusiastic organizational work. His activity was of capital importance during the whole preparation of IWSSIP 2006.

We acknowledge the support of our Universities and of EURASIP, IEEE, IEE, COST, Rohde&Schwarz and first of all, of Hungarian National Office for Research and Technology.

We wish all the conference attendees a successful and fruitful work during the Conference, and pleasant stay in the beautiful Budapest.

<div align="center">
Kálmán Fazekas, Ján Turán
co-chairmen
</div>

PS.: The organizers ask your kind indulgence for the occasional clerical errors in names and for misprints.

INFORMATIONS

Conference location: Hotel Flamenco
1113 Budapest, Tas vezér u. 7

Registration desk:

	Thursday	8:00-18:00
	Friday	8:00-14:30
	Saturday	8:00-14:30

Currency:

The currency in Hungary is Forint. The current exchange rate at the time of printing this booklet is 1 EUR = 276 Ft (daily rate)

Electricity:

The electricity standard in Hungary is 230V AC, 50Hz. Standard European appliances do not need any adaptors.

Time:

The time in Hungary is the same as in the whole central and west Europe, i.e. GMT +1. In September, summer daylight saving time adds 1 more hour.

THURSDAY, 21 SEPTEMBER 2006

8:00-10:00   **REGISTRATION**

Location: **Room Cordoba**

10:00-10:20   **OPENING CEREMONY**
Co-chair: K. Fazekas, J. Turán

10:20-11:00   **TUTORIAL LECTURE:**

THE OLGA PROJECT: HOW STANDARDS ENABLE ON-LINE GAMING OVER HETEROGENEOUS NETWORKS
M. Preda, F. Préteux

11:00-11:20   **Coffee Break**

THURSDAY, 21 SEPTEMBER 2006

Location: **Room Cordoba**

SESSION: **WATERMARKING**
Chair: A. Uhl

11:20-11:40   **A HIGH CAPACITY SECURE WATERMARKING ALGORITHM FOR DOCUMENT IMAGES**
N. S. Mirsattari, M. Jamzad

11:40-12:00   **MULTIPLE RE-WATERMARKING SCENARIOS**
A. Mascher-Kampfer, H. Stögner, A. Uhl

12:00-12:20   **TWO LEVEL DCT BASED DIGITAL WATERMARKING**
A. H. Taherinia, M. Jamzad

12:20-12:40   **A DWT BASED BLIND WATERMARKING METHOD WITH HIGH ROBUSTNESS AND FORGERY DETECTION CAPABILITY**
A. Shahroudy, M. Jamzad

12:40-13:00   **ROBUST ERROR DETECTION FOR H.264/AVC USING RELATION BASED FRAGILE WATERMARKING**
O. Nemethova, G. C. Forte, M. Rupp

13:00-14:20   **Lunch Break**

SESSION: **MULTIMEDIA**
Chair: Z. Bojkovic

14:20-14:40   **ITERATIVE IMAGE RESTORATION FOR DATA FORMS DETECTION**
R. C. Bilcu, A. Burian, S. Alenius, M. Vehviläinen

14:40-15:00   **IMPROVEMENT OF FACE RECOGNITION EFFECTIVENESS BASED ON COLOR INFORMATION**
M. Kawulok and B. Smolka

THURSDAY, 21 SEPTEMBER 2006

Location: **Room Cordoba**

15:00-15:20   **SIMILARITY MEASUREMENT OF ELECTROPHORESIS STRANDS FOR FUNGI FINGERPRINTING**
I.-O. Stathopoulou, G. A. Tsihrintzis, G. Gaitanis, K. Kollia, A. Velegraki

15:20-15:40   **AN ACCURATE METHOD FOR EYE DETECTION AND FEATURE EXTRACTION IN FACE COLOR IMAGES**
I.-O. Stathopoulou, G. A. Tsihrintzis

15:40-16:00   **EFFICIENT HOME VIDEO SURVEILLANCE PLATFORM**
T. Zahariadis, K. Gröneberg, TK. Chiew

16:00-16:20   **Coffee Break**

16:20-16:40   **AUTOMATIC CAMERA CALIBRATION FOR DRIVER ASSISTANCE SYSTEMS**
A. A. G. A. Ribeiro, L. Dihl, C. R. Jung

16:40-17:00   **ENHANCED MOBILE IMAGING FOR DOCUMENT APPLICATIONS**
M. Trimeche, A. Burian, J. Kangas, Markku Vehviläinen

17:00-17:20   **AN EFFICIENT ALGORITHM FOR FACIAL FEATURES EXTRACTION IN COLOR IMAGES**
S. Guerfi, J-P Gambotto, S. Lelandais

17:20-17:40   **ROBUST CAMERA TRACKING FOR AUGMENTED REALITY COMBINING ORTHOGONAL ITERATION AND RANSAC ALGORITHMS**
F. Ababsa , M. Mallem

THURSDAY, 21 SEPTEMBER 2006

Location: **Room Barcelona**

SESSION: **FILTER**
Chair: M. Grgic

11:20-11:40   **SUB-IMAGE HOMOMORPHIC FILTERING TECHNIQUE FOR IMPROVING FACIAL IDENTIFICATION UNDER DIFFICULT ILLUMINATION CONDITIONS**
K. Delac, M. Grgic, T. Kos

11:40-12:00   **IMAGE DENOISING BASED ON A NOVEL ADAPTIVE GAUSSIAN FILTER**
H. Li, J. Yang, J. Sun

12:00-12:20   **DESIGN OF MAXIMALLY FLAT NOTCH FIR FILTERS**
P. Zahradnik, B. Šimák, M. Vlček

12:20-12:40   **PN CODE ACQUISITION WITH A CA-CFAR ADAPTIVE DIGITAL MATCHED FILTER AND ITS REALISATION USING FPGA**
B. Wei, MY. Sharif, AEA. Almaini, TD. Binnie

13:00-14:20   **Lunch Break**

SESSION: **VOICE**
Chair: G. Rozinaj

14:20-14:40   **VOICING TRANSITION FREQUENCY DETERMINATION FOR HARMONIC SPEECH MODEL**
J. Pribil and A. Pribilová

14:40-15:00   **ARTIFICIAL NEURAL NETWORKS USED TO CLASSIFY VOICE NATURAL AND SYNTHETIC, NORMAL AND PATHOLOGIC**
F. R. Leta, A. S. Brandão, J. Lucero, E. Cataldo

THURSDAY, 21 SEPTEMBER 2006

Location: **Room Barcelona**

15:00-15:20 **TRANSMITTING DATA THROUGH THE GSM MOBILE PHONE VOICE CHANNEL**
Z. Mezgec, A. Chowdhury, R. Svečko

15:20-15:40 **ADAPTIVE SPECTRAL DECOMPOSITION FOR QUALITY ENHANCEMENT OF SYNTHESIZED SPEECH**
H. Farsi

15:40-16:00 **AUDIO CLASSIFICATION USING FEATURES DERIVED FROM THE HARTLEY TRANSFORM**
I. Paraskevas, E. Chilton, M. Rangoussi

16:00-16:20 **Coffee Break**

16:20-16:40 **DENOISING OF VOICED SPEECH WITH AUTOREGRESSIVELY FILTERED GABOR LOGONS**
R. Nickel, X. Xiaoqiang

16:40-17:00 **HIGH PERFORMANCE SPEECH DETECTION UNDER BACKGROUND NOISE**
H. Farsi

17:00-17:20 **THE FIRST SPOKEN SLOVAK DIALOGUE SYSTEM USING CORPUS BASED TTS**
G. Rozinaj, A. Páleník, J. Čepko, J. Juhár, A. Čižmár, M. Rusko, R. Jarina

17:20-17:40 **FAST ADDITIVE SOUND SYNTHESIS FOR REAL-TIME SIMULATION OF OCEAN SURFACE**
M. Robine, J. Fréchot

18:00-20:00 **COST 292 Technical Committee meeting**

Location: **Room Granada**

SESSION: **MEDICAL**
Chair: Ž. Čučej

11:20-11:40 **ZIGBEE BASED PATIENTS PARAMETERS MONITORING SYSTEM**
A. Peulić, S. Randić, Ž. Čučej

11:40-12:00 **ANALYSIS OF MR IMAGE IN THE MEASUREMENT OF MAGNETIC SUSCEPTIBILITY**
K. Bartušek, Z. Smékal

12:00-12:20 **COMPARING TWO APPROACHES TO COMPUTE LACUNARITY OF MAMMOGRAMS**
R. H. C. de Melo, E. A. Veira, A. Conci

12:20-12:40 **MODELLING OF THE SWALLOWING FUNCTION USING ELECTRICAL IMPEDANCE TOMOGRAPHY**
P. Kantartzis, P. Liatsis

13:00-14:20 **Lunch Break**

SESSION: **SEGMENTATION**
Chair: R. Stasinski

14:20-14:40 **A HYBRID APPROACH FOR THE SEGMENTATION OF MRI BRAIN IMAGES**
A. B. Abche, A. Maalouf, E. Karam, M. Alameddine

14:40-15:00 **SEGMENTATION OF PARTLY OCCLUDED PLANT LEAVES**
M. Johansson and B. Åstrand

15:00-15:20 **LOCALIZATION AND OBJECT GRABBING IN ROBOTIC USING COLOR IMAGE AND NEURAL NETWORK CLASSIFICATION**
M. Trabelsi, N. Aitoufroukh, S. Lelandais

THURSDAY, 21 SEPTEMBER 2006

Location: **Room Granada**

15:20-15:40   **GENERALIZED ITERATIVE BACK-PROJECTION ALGORITHM FOR SUPER-RESOLUTION MOVING AND STATIC OBJECT EXTRACTION**
K. Malczewski, R. Stasinski

16:00-16:20   **Coffee Break**

SESSION: **IMAGE COMPRESSION**
Chair: P. Planinšič

16:20-16:40   **A NEW CONTEXT-BASED LOSSLESS IMAGE CODING METHOD**
G. Ulacha, R. Stasiński

16:40-17:00   **MOTION VECTOR REFINEMENT FOR VIDEO CODING BASED ON STATISTICAL DISTRIBUTION**
T. Toivonen and J. Heikkilä

17:00-17:20   **EFFICIENT FINE GRANULAR SCALABLE VIDEO CODING USING CONTEXT-BASED BINARY ARITHMETIC CODING FOR BIT-PLANE CODING**
S-H. Kim, Y-S. Ho

17:20-17:40   **IMPLEMENTATION OF SINGLE LIST SPECK CODEC SYSTEM FOR IMAGE COMPRESSION**
S. K. Rizvi, M. Y. Javed, J. Akhtar

FRIDAY, 22 SEPTEMBER 2006

Location: **Room Cordoba**

SESSION: **COST 292**
Chair: A. Saracoglu

8:00-8:20   **TUNNEL ENTRANCE RECOGNITION FOR VIDEO-BASED DRIVER ASSISTANCE SYSTEMS**
C. Claus, H. C. Shin, W. Stechele

8:20-8:40   **RECONSTRUCTION OF 3-D IMAGE FROM STEREO PICTURES WITH DIGITAL FILTERS**
M. Brezňan, R. Jarina

8:40-9:00   **ROBUST FIDUCIALS TRACKING IN AUGMENTED REALITY**
M. Maidi, F-E Ababsa, M. Mallem

9:00-9:20   **A FULLY AUTOMATED TEXTURE-BASED APPROACH FOR THE SEGMENTATION OF SEQUENTIAL IVUS IMAGES**
M. Papadogiorgaki, V. Mezaris, Y.S. Chatzizisis, I. Kompatsiaris, G.D. Giannoglou

9:20-9:40   **A RESCORING METHOD FOR DETECTING OUT OF VOCABULARYWORDS IN A PHONEME-BASED ISOLATED WORD RECOGNIZER**
S. Vaisipour, H. Sameti, B. Babaali

9:40-10:00   **COMPARISON OF SUBJECTIVE AND OBJECTIVE SPEECH QUALITY TESTING METHODS IN THE VoIP NETWORKS**
Z. Becvar, J. Zelenka, M. Brada, T. Valenta

10:00-10:20   **VIDEO OBJECT WATERMARKING USING HU MOMENTS**
P. Tzouveli, K. Ntalianis, S. Kollias

10:20-10:40   **iDARBS A DISTRIBUTED BLACKBOARD SYSTEM FOR IMAGE PROCESSING**
R. J. Tait, G. Schaefer, A. A. Hopgood

10:40-11:00   **Coffee Break**

FRIDAY, 22 SEPTEMBER 2006

Location: **Room Cordoba**

SESSION: **COST 292**
Chair: S. Kiranyaz

11:00-11:20   **TOWARDS HIGH PERFORMANCE IMAGE REGISTRATION USING INTELLIGENT AGENTS**
R. J. Tait, G. Schaefer, A. A. Hopgood

11:20-11:40   **MRF-BASED VIDEOTEXT DETECTION**
A. Saracoglu, A. A. Alatan

11:40-12:00   **THE EFFECTS OF FITNESS FUNCTIONS ON GENETIC ALGORITHMS APPLIED TO RELEVANCE FEEDBACK IN IMAGE RETRIEVAL**
S. F. Silva, C. A. Z. Barcelos, M. A. Batista

12:00-12:20   **THE ESTIMATION OF CORRESPONDING COLORS UNDER DIFFERENT VIEWING CONDITIONS**
L. Mandic, S. Grgic, P. Liatsis

12:20-12:40   **A NEW MOTION ACTIVITY MEASURE IN TEMPORAL VIDEO TRANSCODING**
F. Lonetti, F. Martelli

12:40-13:00   **A NOVEL SHAPE DESCRIPTOR OVER MULTI-SCALE EDGE FIELD: 2D WALKING ANT HISTOGRAM**
M. Ferreira, S. Kiranyaz, M. Gabbouj

13:00-13:20   **FEATURE VECTOR REDUCTION IN CBIR SYSTEM WITH RELEVANCE FEEDBACK**
G. Zajić, N. Kojić, V. Radosavljević, S. Čabarkapa, B. Reljin

13:20-13:40   **IMAGE ANALYSIS USING DOMAIN KNOWLEDGE AND VISUAL CONTEXT**
P. Mylonas, T. Athanasiadis, Y. Avrithis

13:40-15:00   **Lunch Break**

15:00-15:00   **Social Event**

FRIDAY, 22 SEPTEMBER 2006

Location: **Room Barcelona**

SESSION: **COMMUNICATION**
Chair: S. Voliotis

8:00-8:20   **COMMUNICATION MODEL OF THE SYDMOS SYSTEM AND TEBID ASCII PROTOCOL**
M. Vestenický, R. Hudec

8:20-8:40   **USING SIMULATIONS FOR QUALIFICATION OF ADSL2+ LINES**
J. Vodrážka, P. Jareš

8:40-9:00   **DATA RATE INCREASING FOR HIGH SPEED MULTIMEDIA SERVICES IN ENHANCED WCDMA MOBILE RADIO NETWORK**
V. Wieser, V. Pšenák

9:00-9:20   **BLIND MINIMUM OUTPUT ENERGY ALGORITHM VERSUS CONVENTIONAL DETECTION FOR CDMA SIGNALS RECEIVING**
S. Benco, L. Copjan, D. Kocur, S. Marchevsky

9:20-9:40   **A DIGITAL VIDEO BROADCAST TO ETHERNET/IP BRIDGE SYSTEM USING HARDWARE-SOFTWARE CO-DESIGN**
L. Rubio, E. Terradillos, F. Gomez, I. Alvaro

9:40-10:00   **ANALYSIS OF AGGREGATION IN ADSL ACCESS NETWORKS**
L. Konopka, P. Hampl

10:00-10:20 **QoS-AWARE HANDOFF SCHEMES FOR ALL-IP MOBILE/AD-HOC NETWORKS**
T. Zahariadis, S. Voliotis, D. Bargiotas, Ch. Manasis

10:20-10:40 **DIRECT SAMPLING SYSTEM FOR GALILEO / GPS APPLICATIONS**
A. Alonso, J.M. Perre, I. Arizaga

10:40-11:00 **Coffee Break**

FRIDAY, 22 SEPTEMBER 2006

Location: **Room Barcelona**

SESSION: **COMMUNICATION**
Chair: B. Zovko-Cihlar

11:00-11:20   **REAL-TIME USER-SELECT VIDEO STREAMING ON A P2P NETWORK**
M. C. Du, C. T. Chiu

11:20-11:40   **EDUCATION OF REMOTE CONTROL, COMMUNICATIONS AND COMPUTER VISION BY A SMALL ELECTRIC VEHICLE CONTROLLED REMOTELY OVER THE INTERNET**
J. Otič, K. Benkič, P. Planinšič

11:40-12:00   **QUALITY OF MULTIMEDIA SERVICES IN RADIOCOMMUNICATION NETWORKS**
M. Suknaic, B. Zovko-Cihlar, A. Dodig

12:00-12:20   **CELL SIZE CALCULATION IN WiMAX FIXED WIRELESS ACCESS SYSTEM**
W. Afric, B. Zovko-Cihlar, M. Grgic

12:20-12:40   **EVOLUTION OF SERVICES AND APPLICATIONS IN ENVIRONMENTS OF THE CONVERGED NETWORKS AND NGN**
E. Mikóczy, P. Podhradský, B. Zovko-Cihlar

12:40-13:00   **ON DESIGN AND COMPLEXITY OF VECTOR QUANTIZER**
T. Vušurović, V. Šenk

13:00-13:20   **NEED FOR CROSS-LAYER OPTIMIZATION IN AD HOC NETWORKS FOR REAL-TIME VIDEO STREAMING**
Z. Bojkovic, B. Bakmaz

13:40-15:00   **Lunch Break**

15:00-15:00   **Social Event**

FRIDAY, 22 SEPTEMBER 2006

Location: **Room Granada**

SESSION: **IMAGE PROCESSING**
Chair: M. Preda

8:00-8:20   **MULTIPROCESSOR ARCHITECTURE FOR REAL TIME IMAGE ACQUISITION AND PROCESSING**
W. Ahmed, N. Masud, T. Abbas

8:20-8:40   **TELECINE CALIBRATION USING GREY CARD VIDEO LEVELS**
T. Lukicic , S. Grgic, M. Grgic

8:40-9:00   **AN EFFICIENT ALGORITHM FOR EDGE DETECTION USING ROBERT-ZERNIKE MOMENT**
R. Li, S. Qin

9:00-9:20   **A COMPREHENSIVE STUDY TO FIND THE EFFECT OF DIFFERENT NOISE REMOVAL METHODS ON LINEAR MOTION BLUR PARAMETER ESTIMATION**
M. E. Moghaddam and M. Jamzad

9:20-9:40   **VIPS: VIDEO PROCESSING IN A SECOND**
H. Norell, N. Lawal, M. ONils

9:40-10:00   **A NEW METHOD FOR COLOUR MATHEMATICAL MORPHOLOGY BASED ON SMOOTHED HISTOGRAM**
X. Benavent, J. Domingo, F. Pardo

10:00-10:20   **NONLINEAR DIFFUSION WITH LOCAL ADJUSTMENT OF THE GRADIENT THRESHOLD**
A. M. G. Pinheiro

10:20-10:40   **PHOTOGRAPHIC PRINTS IDENTIFICATION**
C. J. S. Oliveira, N. C. Batista, A. de Albuquerque Ara´ujo, J. L. de Souza Pio

10:40-11:00   **Coffee Break**

FRIDAY, 22 SEPTEMBER 2006

Location: **Room Granada**

SESSION: **IMAGE PROCESSING**
Chair: S. Grgic

11:00-11:20 **COLOR IMAGE ENHANCEMENT THROUGH 2D HISTOGRAM EQUALIZATION**
D. Menoti, A.P. Melo, A. de A. Araújo, J. Facon, E. Sgarbi

11:20-11:40 **A FIRST STUDY OF PATTERN CLASSIFICATION USING FUZZY COGNITIVE MAPS**
G. A. Papakostas, Y. S. Boutalis, D. E. Koulouriotis, B. G. Mertzios

11:40-12:00 **SPIHT PERFORMANCE IMPROVEMENT**
J.-R. Ding, J.-F. Yang

12:00-12:20 **PROPERTIES OF MOTION ESTIMATION ALGORITHMS AND INFLUENCE OF PREPROCESSING TECHNIQUES ON MOTION ESTIMATION PERFORMANCE**
J. Huska, P. Kulla

12:20-12:40 **SELECTIVE CHANGE-DRIVEN IMAGE PROCESSING FOR HIGH-SPEED MOTION ESTIMATION**
F. Pardo, X. Benavent, J.A. Boluda, F. Vegara

12:40-13:00 **EXPLOITING SPATIAL CORRELATION FOR FAST MODE DECISION IN H264 INTRA CODING**
S. M. Tran, M. Preda and F. J. Préteux

13:00-13:20 **VIDEO ENCRYPTION EXPLOITING NON-STANDARD 3D DATA ARRANGEMENTS**
S. A. Kramatsch, H. Stögner, A. Uhl

13:20-13:40 **DIFFERENTIAL PULSE CODE MODULATION USING TRULY ADAPTIVE QUANTISER**
N. Radi, A. J. Hussain, D. Al-Jumeily, A. Taleb-Bendiab

13:40-15:00 **Lunch Break**

15:00-15:00 **Social Event**

SATURDAY, 23 SEPTEMBER 2006

Location: **Room Barcelona**

SESSION: **TRANSFORMATION**
Chair: J. Turán

8:00-8:20   **USING HOUGH TRANSFORM AS AN AUXILIARY TECHNIQUE FOR VICKERS HARDNESS MEASUREMENT**
M. Macedo, V. B. Mendes, A. Conci, F. R. Leta

8:20-8:40   **PARALLELOGRAM DETECTION USING THE TILED HOUGH TRANSFORM**
C. R. Jung, R. Schramm

8:40-9:00   **DENOISING WITH FLEXIBLE HISTOGRAM MODELS ON MINIMUM DESCRIPTION LENGTH PRINCIPLE**
V. Kumar, J. Heikkonen

SESSION: **POSTER SESSION**
Chair: J. Turán

9:00-10:40   **TOPOLOGY MODELLING OF METALLIC ACCESS NETWORK**
P. Jareš

MULTIFRACTAL SPECTRUM OF TELEWORKERS GENERATED TRAFFIC
J. Futó

THE LOCALIZATION OF ERRORS OF FAST SEARCH MOTION ESTIMATION ALGORITHM
J. Gamec, M. Gamcová

SIMPLE IMAGE INDEXING AND RETRIEVAL TECHNIQUE BASED ON DOMINANT COLOURS
I. Gladišová

SATURDAY, 23 SEPTEMBER 2006

Location: **Room Barcelona**

9:00-10:40   **TRANSFORM BASED INVARIANT FEATURE EXTRACTION**
J. Turán, L. Ovseník, J. Turán, jr.

NEGATIVE DISPERSION IN INDEX GUIDING PHOTONIC CRYSTAL FIBERS
M. Lucki, L. Boháč, J. Burčík

RESULTS OF INVARIANT OBJECT RECOGNITION EXPERIMENTS USING SYSTEMS BASED ON ZERNIKE MOMENTS, RADON TRANSFORM AND TRACE TRANSFORM
D. Šiškovičová

EFFECT OF SCALING DOWN ON SOME NLTL PARAMETERS
A. Reichardt, G. Varga, Gy. Veszely

CHARACTER LOCALIZATION
B. Enyedi, L. Konyha, K. Fazekas

10:40-11:00   **Coffee Break**

SATURDAY, 23 SEPTEMBER 2006

Location: **Room Barcelona**

SESSION: **3D and SIGNAL PROCESSING**
Chair: S. M. Tran

11:00-11:20 **SURFACE SIMPLIFICATION USING QUADRIC ERROR METRICS**
D. Q. Tran, K. Fazekas, S. M. Tran

11:20-11:40 **SURFACE CURVATURES FOR 3D FACE RECOGNITION**
Y. Lee, T. Yi

11:40-12:00 **RECONFIGURABLE DISCRETE PERCEPTRON**
J. Lisiecka-Frszczak

12:00-12:20 **TSCHIRNHAUNSEN POLYNOMIALS OF LINEAR MULTIVARIABLE SYSTEMS BASED ON THE FUNDAMENTAL MATRIX APPROACH**
B. G. Mertzios, G. F. Fragulis

12:20-12:40 **RESILIENT MEAN SHIFT ALGORITHM**
P. Padungweang, S. Chiewchanwattana, K. Sunat, Ch. Lursinsap

12:40-14:00 **Lunch Break**

SATURDAY, 23 SEPTEMBER 2006

Location: **Room Granada**

SESSION: **COST 292 MCM**
Chair: E. Izquierdo

8:00-10:40   **COST 292 Management Committee Meeting**

10:40-11:00   **Coffee Break**

11:00-12:40   **COST 292 Management Committee Meeting**

12:40-14:00   **Lunch Break**

14:00-15:00   **IWSSIP Management Committee Meeting**

THURSDAY, 21 SEPTEMBER 2006

Time			
8:00–10:00	Registration		
10:00–10:20	Opening Ceremony (Room Cordoba)		
10:20–11:00	Tutorial presentation (Room Cordoba)		
11:00–11:20	Coffee Break		
11:20–13:00	Room Cordoba Watermarking	Room Barcelona Filter	Room Granada Medical
13:00–14:20	Lunch Break		
14:20–16:00	Room Cordoba Multimedia	Room Barcelona Voice	Room Granada Segmentation
16:00–16:20	Coffee Break		
16:20–17:40	Room Cordoba Multimedia	Room Barcelona Voice	Room Granada Image Compression
18:00–20:00		Room Barcelona COST 292 TC meeting	

FRIDAY, 22 SEPTEMBER 2006

	Room Cordoba COST 292	Room Barcelona Communication	Room Granada Image Processing
8:00–10:40	Room Cordoba COST 292	Room Barcelona Communication	Room Granada Image Processing
10:40–11:00		Coffee Break	
11:00–13:40	Room Cordoba COST 292	Room Barcelona Communication	Room Granada Image Processing
13:40–15:00		Lunch Break	
15:00–		Social Event	

SATURDAY, 23 SEPTEMBER 2006

	Room Barcelona	Room Granada
8:00–9:00	**Transformation**	**COST 292 MCM**
9:00–10:40	Room Barcelona **Poster Session**	Room Granada **COST 292 MCM** (8:00–10:40)
10:40–11:00	Coffee Break	
11:00–12:40	Room Barcelona **3D and Image Processing**	Room Granada **COST 292 MCM** (11:00–12:40)
12:40–14:00	Lunch Break	
		Room Granada **IWSSIP MCM** (14:00–15:00)

History of Visegrád

Visegrád (German: *Plintenburg*) is a small town in Pest County in Hungary with a long and rich history. Situated north of Budapest on the right bank of the Danube in the Danube Bend, the town has a population 1,654 as of 2001. Visegrád is famous for the remains of the early Renaissance summer palace of Matthias Corvinus and the medieval Citadel.

Name Visegrád is Slavic by origin and means "the high city". There is a town with same name in present-day Bosnia and Herzegovina (see: Višegrad). Visegrád was first mentioned in 1009 as a county town and chief town of archdeaconry. After the destructive Mongol invasion in 1242, the town was rebuilt in a slightly different location to the south. King Charles I of Hungary made Visegrád, his hometown, the royal seat of Hungary in 1325.

In 1335, Charles I of Hungary hosted a two-month congress held at Visegrád, with other the Bohemian king John of Luxembourg, and the Polish king, Casimir III. It was crucial in creating a peace between the three, and securing an alliance between Poland and Hungary against the Habsburgs. Later, Sigismund, Holy Roman Emperor (and also king of Hungary) moved the royal seat to Buda between 1405-1408, then Matthias Corvinus of Hungary used *Visegrád* again as a country residence. Visegrád lost importance when the medieval Hungarian state fell into three pieces as a consequence of the Ottoman Turkish occupation.

In 1991, the leading politicians of Hungary, Czechoslovakia, and Poland met here to form a periodical forum between these countries, the Visegrád group, with an intentional allusion to the meeting centuries earlier in 1335. Visegrád was granted town status in 2000.

Monuments of Visegrád

Sibrik Hill (Roman military camp and 11th-century castle):

Aerial photography: Sibrik Hill

The ruins of this military camp can be seen outside Visegrád, to the north, on a hill that overlooks the Danube. The camp has a triangular ground plan. It was built in the first half of the 4th century as one of the important fortifications along the limes, the frontier of the Roman Empire. Its praetorium (the commander's building) was construction at the end of the 4th century. In the early 5th century, the Roman Army abandoned the military camp. In the 10th and 11th centuries, the renovated fortification became a regional centre of the recently formed Hungarian State. The name "Visegrád" appears at this time (1009) for the first time as the name of this regional centre. The fortification was finally destroyed in 1242 by the Mongol invasion.

Upper Castle or "Citadel" (13-15th centuries):

After the Mongol invasion, King Béla IV and his wife had a new fortification system constructed in the 1240-50s near the earlier, destroyed

one. The first constructed part of the new system was the Upper Castle on top of a high hill. The castle was laid out on a triangular ground plan and had three towers at its corners. In the 14th century, at the time of the Angevin kings of Hungary, the castle became a royal residence and was enlarged with a new curtain wall and palace buildings. Around 1400 King Sigismund of Luxembourg also had a third curtain wall constructed and enlarged the palace buildings. At the end of the 15th century, King Matthias Corvinus of Hungary had the interior part of castle renovated. The Upper Castle also served for the safekeeping of the Hungarian Royal Insignia between the 14th century and 1526. In 1544 it was occupied by the Ottoman Turks, and - apart from a short period in 1595-1605 - it remained on Turkish hands until 1685. The castle was seriously damaged by the Turks and was never used afterwards. The castle is now open to the public for visit.

Aerial photography: Visegrád Mountain Fastness

Lower Castle or "Solomon Tower" (13th century; Museum):

The Lower Castle is the part of the fortification system that connects the Upper Castle with the Danube. In its centre rises the Solomon Tower, a large, hexagonal residential tower dating from the 13th century. In the 14th century, new curtain walls were built around the tower. During a

Turkish raid in 1544, the southern part of the tower collapsed. Its renovation began only in the 1870s and finished in the 1960s. At present, the Tower houses exhibitions installed by the King Matthias Museum (Mátyás Király Múzeum) of Visegrád. The exhibitions present the reconstructed Gothic fountains from the Royal Palace, Renaissance sculpture in Visegrád, and the history of Visegrád.

Aerial photography: "Solomon Tower"

Royal Palace or the "Palace of Matthias Corvinus of Hungary" (14-15th centuries, Museum):

The first royal house on this site was built by King Charles I of Hungary after 1325. In the second half of the 14th century, this was enlarged into a palace by his son, King Louis I of Hungary. In the last third of the 14th century, King Louis and his successor Sigismund of Luxembourg had the majority of the earlier buildings dismantled and created a new, sumptuous palace complex, the extensive ruins of which are still visible today. The palace complex was laid out on a square ground plan measuring 123 x 123 m. A garden adjoined to it from the north and a Franciscan friary, founded by King Sigismund in 1424, from the south. In the time of Louis I and Sigismund the palace was the official residence of the Kings of Hungary

until about 1405-08. Between 1477-84 King Matthias Corvinus had the palace complex reconstructed in late Gothic style, but in the decoration of the architectural parts also the Italian Renaissance style was used, which appeared here for the first time in Europe outside Italy. After the Ottoman Turks' siege in 1544 the palace fell into ruins, and by the 18th century it was completely covered by earth. Its excavation began in 1934 and continues to our days. At present, the reconstructed royal residence building is open to the public, and houses exhibitions on the history of the palace and reconstructed historical interiors.

Aerial photography: Royal Palace