

# IWSSIP'05 PROGRAMME

## Schedule Outline

Thursday, 22 September 2005

08:00-11:00 <b>Registration</b>	
<b>Hall A</b>	
08:30-09:00 <b>Opening ceremony, Welcome speeches</b>	
09:00-09:45 <b>Tutorial session</b>	
09:45-11:15 <b>Plenary session</b>	
11:15-11:30 <b>Coffee break</b>	
<b>Hall A</b> <span style="float: right;"><b>Hall B</b></span>	
11:30-12:45 <b>Special session Multi-Model Signal Processing &amp; Applications</b>	11:30-12:20 <b>Session Multimedia Systems</b>
12:45-13:45 <b>Special session Video Coding, Content Processing and Transmission Infrastructure</b>	12:20-13:30 <b>Session Signal Processing Technologies and Implementations</b>
13:45-15:15 <b>Lunch break</b>	
<b>Hall A</b>	
15:15-16:45 <b>Plenary session</b>	
16:45-17:00 <b>Coffee break</b>	
<b>Hall A</b> <span style="float: right;"><b>Hall B</b></span>	
17:00-18:00 <b>Special session, Wireless Ad-hoc Multimedia Networks</b>	17:00-18:15 <b>Session Multimedia Content Processing 1</b>
18:00-19:30 <b>Special session Scalable Video Coding (SVC)</b>	18:30-19:30 <b>Session Multimedia Content Processing 2</b>

Friday, 23 September 2005

08:00-16:00 <b>Guided tour to Delphi - Lunch</b>	
<b>Hall A</b>	
17:00-17:45 <b>Tutorial session</b>	
17:45-18:00 <b>Coffee break</b>	
18:00-19:30 <b>Plenary session</b>	

## Schedule Outline (continued)

Saturday, 24 September 2005

Hall A	
08:30-09:15	<b>Tutorial session</b>
09:15-10:45	<b>Plenary session</b>
10:45-11:00 <b>Coffee break</b>	
Hall A	Hall B
11:00-12:15	11:00-12:20
Special session <b>Information Mining From Complex Signals And Systems 1</b>	Session <b>Multimedia Data Compression</b>
12:15-13:15	12:20-13:40
Special session <b>Information Mining From Complex Signals And Systems 2</b>	Session <b>Signal processing techniques and algorithms</b>
13:45-15:15 <b>Lunch break</b>	
Hall A	
15:15-16:45	<b>Plenary session</b>
16:45-17:00 <b>Coffee break</b>	
Hall A	Hall B
17:00-18:15	17:00-18:20
Special session <b>Information Technologies (IT) and their Applications 1</b>	Session <b>Implementations</b>
18:15-19:15	18:20-19:40
Special session <b>Information Technologies (IT) and their Applications 2</b>	Session <b>Applications</b>

**Detailed Schedule**  
**Thursday, 22 September 2005**

**Hall A**

08:00-11:00	Registration
08:30-09:00	Opening ceremony, Welcome speeches
09:00-09:45	Tutorial session
<u>Session Chair</u>	<b>D. A. Karras</b> <b>D. Marpe</b> , The H.264 / MPEG-4 AVC Standard: Core Coding Technology and Recent Extensions
09:45-11:15	Plenary session
<u>Session Chair</u>	<b>D. A. Karras</b> <b>D. G. Lainiotis</b> , Superfast Filters <b>M. Polycarpou</b> , Computational Intelligence in Feedback Systems
11:15-11:30	Coffee break
11:30-12:45	Special session <b>Multi-Model Signal Processing &amp; Applications</b>
<u>Session Chair</u>	<b>S. K. Katsikas and V. C. Moussas</b> Multivariate AR Model Order Identification Using Partition Theory, <b>S. Sp. Pappas, A. K. Leros, S. K. Katsikas</b> , HELLAS Adaptive Estimation in Descriptor Systems, <b>A. K. Leros</b> , HELLAS A Multi-Model Approach to Fatigue Crack Growth Monitoring and Prediction, <b>V. C. Moussas, S. K. Katsikas</b> , HELLAS Evolutionary Lainiotis' Algorithms for System Identification: a Survey, <b>G. N. Beligiannis</b> , HELLAS Time Invariant Kalman Filter Implementation Via General Chandrasekhar Algorithm, <b>N. Assimakis, A. Kechriniotis, S. Voliotis, F. Tassis</b> , HELLAS
12:45-13:45	Special session <b>Video Coding, Content Processing and Transmission Infrastructure</b>
<u>Session Chair</u>	<b>K. Fazekas</b> Low Bitrate Motion Compensated Video Compression, <b>K. Fazekas, B. Enyedi, L. Konyha</b> , HUNGARY The StirMark watermarking attack in the DWT domain, <b>M. Mitrea, F. Prêteux, M. Petrescu, A. Vlad</b> , FRANCE, ROMANIA Internet Protocol Version 6 As Backbone Of Heterogeneous Networks, <b>B. Bakmaz, Z. Bojkovic</b> , SERBIA AND MONTENEGRO Trace Transform Based Invariant Feature Extraction System, <b>P. Filo, J. Turán, O. Ovseník, K. Fazekas</b> , SLOVAKIA, HUNGARY
13:45-15:15	Lunch break
15:15-16:45	Plenary session
<u>Session Chair</u>	<b>Th. Zahariadis</b> <b>M. Pastorino</b> , Inverse scattering procedures for active imaging systems at radio frequencies and microwaves <b>D. Bagni</b> , Transcoding MPEG-2 compressed video into H.264/AVC
16:45-17:00	Coffee break
17:00-18:00	Special session, <b>Wireless / Ad-hoc Multimedia Networks</b>
<u>Session Chair</u>	<b>D. Bargiotas</b> Approaches to Energy Consumption Management in Mobile Ad-hoc networks, <b>C. Katsigiannis, G.N. Prezerakos, I.S. Venieris</b> , HELLAS Performance Evaluation of the 802.16e Uplink in mobile fading channels, <b>P. I. Dallas, R. Manishankar, G. Karachalios, G. S. Yovanof</b> , HELLAS Blind Channel Tracking For Zero Padding OFDM System Using A Two-Layer Neural Network, <b>He Huang, Jing Yang, Yuhang Wang, Hongxing Zou</b> , CHINA An efficient QoS scheme for all-IP Mobile Ad-hoc Networks, <b>Th. Zahariadis, S. Voliotis, Ch. Manasis, D. Bargiotas</b> , HELLAS

## ***Detailed Schedule (continued)***

18:00-19:30 **Special session Scalable Video Coding (SVC)**

Session Chair **D. Marpe**

Scalable Video Coding – Is it Going to Work?, **J.-R. Ohm, M. Wien**, GERMANY

Improving JSVM with dead sub-streams and quality layers, **I. Amonou, N. Cammas, S. Kervadec, S. Pateux**, FRANCE

Basics Concepts For Supporting Spatial And SNR Scalability In The Scalable H.264/MPEG4-AC Extension, **H. Schwarz, D. Marpe, and T. Wiegand**, GERMANY

Storage and RTP Transport of Scalable Video, **Th. Rathgen, P. Amon and A. Hutter**, GERMANY

## **Hall B**

11:30-12:20 **Session Multimedia Systems**

Session Chair **G. Rozinaj**

A New Coder For Bilinear Transformation IN H.263, **M. Tabandeh, F. Marvasti, S. M. Bouzari**, IRAN

A Preliminary Non Linear Analysis Of Internet Data Traffic, **M. P. Hantias, I. Diakakis, I. Almaliotis, S. Tsitmidelis**, HELLAS

Authentication Platform For Seamless Handover In Heterogeneous Environments, **D. Nikitopoulos, N. Papaoulakis, A. Trakos, A. Giamas**, HELLAS

The Hierarchical Traceability Codes For Multimedia Fingerprinting, **Yu-Tzu Lin, Ja-Ling Wu**, TAIWAN

Using Public Key Infrastructure (PKI) Secure University Campus Networks, **M. Papalabrou, I. K. Almaliotis, I. Diakakis, A. Proimadis, I. Christakis**, HELLAS

12:20-13:30 **Session Signal Processing Technologies and Implementations**

Session Chair **P. Liatsis and M. Rangoussi**

Real Time Car Detection in Images Based on an Adaboost Machine Learning Approach and A Small Training Set, **M. Stojmenovic**, CANADA

Fuzzy-Genetic Cell Boundary Extraction In Medical Images, **G. Karkavitsas, M. Rangoussi**, HELLAS

Image Segmentation Using Pulse Coupled Neural Networks, **P. Liatsis, B. Li, T. Kos, I. Srdic**, UNITED KINGDOM, CROATIA

A New Object Detection Algorithm Based On Adaptive Lifting Scheme, **M. Amiri, H. R. Rabiee**, IRAN

Automatic Ladelling Of Facial Of Features In Still Images, **J. P. De La Cruz Gutierrez**, GERMANY

Dynamically Reconfigurable Processor For Multimedia Applications, **H. Mlinaric, K. Duracic, M. Kovac**, CROATIA

Speech Period Detection Using Neural Network Classification, **A. Vrábel, G. Rozinaj**, SLOVAKIA

17:00-18:15 **Session Multimedia Content Processing 1**

Session Chair **M. Grgic and B. Simac**

Digital Image Watermarking in Wavelet Domain Based On FSK Modulation, **A. Baheshti, A. Yaghoobi**, IRAN

The Influence of Simultaneous Contrast on Image Appearance, **L. Mandic, S. Grgic**, CROATIA

Generalization Abilities Of Appearance-Based Subspace Face Recognition Algorithms, **K. Delac, M. Grgic, S. Grgic**, CROATIA

Quantization Based Video Watermarking With Controlled Degradation, **S. Kurup, G. Sridhar, V. Sridhar**, INDIA

Real Time Contour Separation, **A. Frolov, S. Primechaev**, CZECH REPUBLIC

Object-Driven Content-Based Image Retrieval, **I. Pratikakis, I. Vanhamel, H. Sahli, B. Gatos, S. Perantonis**, GREECE

Voxel-Based 3d Face Representations For Recognition, **A. Belen Moreno, A. Sanchaz, J. Fco. Velez**, SPAIN

## ***Detailed Schedule (continued)***

18:30-19:30 **Session Multimedia Content Processing 2**

Session Chair **C. Sbert and A. Conci**

Study on The Real Time Detecting And Tracking Of Moving Object, **Jun Zhou, Xin-Hao Li, Cheng-Zhi Sun, Ming-Ying Wu**, CHINA

Speaker Identification Using Orthogonal and Discriminative Features, **S. H. Davarpanah, A. Mirzaei**, IRAN

Subjective And Simultaneous Estimation of Depth Perception On Computer-Generated Stereogram, **M. Iizuka, Y. Ookuma**, JAPAN

Color Images Filtering by Anisotropic Diffusion, **B. Coll, J. L. Lisani, C. Sbert**, SPAIN

A System To Enhance Details On Partially Shadowed Images, **R. H. Correia De Melo, E. A. Vieira, A. Conci**, BRAZIL

On the Line Width Influence in Directional Field Determination for Fingerprint Images, **F. Viola, S. L. O. Gonzaga, A. Conci**, BRASIL

***Detailed Schedule (continued)***

Friday, 23 September 2005

8:00-16:00    Guided tour to Delphi  
                 Lunch

Hall A

17:00-17:45    Tutorial session

Session Chair    **S. Voliotis**

**M. Bartkowiak**, Recent developments in audio coding

17:45-18:00    Coffee break

18:00-19:30    Plenary session

Session Chair    **S. Voliotis**

**D. S. Levine**, Neural Network Principles for Organisms in Nonstationary Environments

**F. M. Ham**, Classification of Infrasound Events: A Neural Network approach

***Detailed Schedule (continued)***  
**Saturday, 24 September 2005**

**Hall A**

- 8:30-9:15 **Tutorial session**  
Session Chair **Th. Zahariadis**  
**P. Schelkens**, Multiple Description Coding for Scalable Multimedia Coding
- 9:15-10:45 **Plenary session**  
Session Chair **D. A. Karras**  
**G. C. Giakos**, Novel Multifusion Imaging Technologies: From Cancer Detection to Semiconductor Wafer Inspection and Nanophotonics  
**P. Perner**, Image Processing and Image Mining for Biotechnological Inspection Processes
- 10:45-11:00 **Coffee break**
- 11:00-12:15 **Special session Information Mining From Complex Signals And Systems 1**  
Session Chair **J. Turan**  
Traffic Engineering in Multi-service Networks based on Computational Intelligence, **V. Pasias, D.A. Karras, and R.C. Papademetriou**, GREECE  
On Traffic Engineering in Survivable Multi-service Backbone Networks, **V. Pasias, D. A. Karras, R. C. Papademetriou**, GREECE  
A Distributed Arithmetic Architecture for Fast Implementation of Vector or Matrix Products, **G.K.Grigoriadis, Y.S.Boutalis, B.G Mertzios**, GREECE  
Combining Backpropagation and Genetic Algorithms to Train Neural Networks, **G. A. Papakostas, Y. S. Boutalis, S. T. Samartzidis, D. A. Karras, B. G. Mertzios**, GREECE
- 12:15-13:15 **Special session Information Mining From Complex Signals And Systems 2**  
Session Chair **B. G. Mertzios**  
A Structural Similarity Based Image Fusion Algorithm for Night Vision Applications, **Anwaar-UI-Haq, A. M. Mirza, S. Qamari**, PAKISTAN  
Analysis of Singular Systems using the Haar Wavelet Transform, **D. A. Karras, P. Sotiropoulos and B.G. Mertzios**, GREECE  
The Fundamental Matrix in Second-Order ARMA Systems, **B. G. Mertzios and G. F. Fragulis**, GREECE  
A Comparative Study Of Color-Texture Image Features, **D. K. Iakovidis, D. E. Maroulis, and S.A Karkanis**, GREECE
- 14:00-15:15 **Lunch break**
- 15:15-16:45 **Plenary session**  
Session Chair **B. Zovko Chilar**  
**B. Prasad**, Knowledge-Based Web Systems for Product Representation and Recommendation  
**K. Berberidis**, Frequency Domain Adaptive Filtering in Signal Processing & Communications
- 16:45-17:00 **Coffee break**
- 17:00-18:15 **Special session Information Technologies (IT) and their Applications 1**  
Session Chair **P. Planinšič**  
A Generic Simulation Environment for Knee Joint Kinematics Simulations, **D. Heric, B. Potočnik**, SLOVENIA  
Software Concept for Power Quality Study, **P. Planinšič, B. Bizjak**, SLOVENIA  
Context based quantization using Bayesian inference, **D. Gleich, M. Datcu**, GERMANY  
Scale Adaptive Edge Detection using Maximum Entropy, **D. Heric, D. Zazula**, SLOVENIA  
Advanced DSP based system for image transmission over GSM/GPRS networks, **D. Gleich, P. Planinšič, J. Mohorko**, SLOVENIA
- 18:15-19:15 **Special session Information Technologies (IT) and their Applications 2**  
Session Chair **Ž. Čučej**  
Wireless monitoring system of biomedical data: security issues, **Ž. Čučej, A. Peulić, S. Randjić**, SLOVENIA  
Combining Features from Wavelet Decomposition for Vehicle Detection, **P. Liatsis, T. Romih, Ž. Čučej, P. Planinšič**, U.K., SLOVENIA  
Subjective assessment of the quality of advanced coded video signal, **M. Hebar**, SLOVENIA  
Work Based Learning in International Environment, **T. Welzer, B. Brumen, M. Družovec, K. Udir, M. Ivanišin**, SLOVENIA

## Detailed Schedule (continued)

### Hall B

11:00-12:20 **Session Multimedia Data Compression**

Session Chair **M. Domanski and B. Carpentieri**

Efficient Compression Of Egg Signals Based On Two Dimensional Wavelet Transform And Dct Decimation, **M. Moazami-Goudarzi, H. R. Rabiee, M. Ghanbari**, IRAN

Video Coding Using Matching Pursuit With Image-Adapted Dictionary, **L. Gorecki, M. Domanski**, POLAND

Architecture For Denoising Eeg Signals Based On Discrete Wavelet Transform, **A. G. Barrera, D. M. Ballesteros**, COLOMBIA

Improving The Performance Of Adaptive Linear Prediction Coding (Alpc) Via Least Square Minimization, **G. Motta, J. A. Storer, B. Carpentieri**, USA

Efficient Gradient-Based Mode Selection For Intra 4x4 Coding In H.264/Avc, **J. C. Pujol-Alcolado, A. Martin-Navas, M. De-Frutos, F. Diaz-De-Maria**, SPAIN

On Context-Based Predictive Techniques For Lossless Image Compression, **G. Ulacha, R. Stasinski**, POLAND

Blur Identification In Noisy Images Using Radon Transform And Power Spectrum Modeling, **M. E. Moghaddam, M. Jamzad**, IRAN

A Fast Skipping Policy For H.263 Video Transcoder, **M. A. Bonuccelli, F. Lonetti, F. Martelli**, ITALY

12:20-13:40 **Session Signal processing techniques and algorithms**

Session Chair **K. Berberidis and S. Hatami**

An Interesting Property Of The Doubling Algorithm For Solving The Discrete Time Riccati Equation, **N. Assimakis, S. Roulis, D. G. Lainiotis, M. Triandafillidis**, HELLAS

An Operator For The Analysis Of Superimposed Intrinsically Two Dimensional Patterns, **Di Zang, G. Sommer**, GERMANY

Non-Separable 2-D And 3-D Discrete Wavelet Transform For Image And Video Processing Using Lifting Scheme, **S. Hatami, S. Sharifi, M. Kamarei, H. Ahmadi, A. D. Abazari**, IRAN

Hardware Implementation Of 2d Discrete Wavelet Transform By Using Nonseparable Lifting Scheme, **S. Hatami, S. Sharifi, M. Kamarei, H. Ahmadi**, IRAN

Level-Dependent Wavelet Denoising: Application To Very Noisy Ecg Signals, **S.A. Chouakri, F. Bereksi-Reguig, S. Ahmaidi, O. Fokapu**, ALGERIE

The Optimum Configuration For Sampling Rate Conversion From CD To Dat Using Multistage Interpolation And Decimation, **M. Mottaghi, S. Farazi, M. G. Shayesteh**, IRAN

Blind Signal Processing Algorithms, **A. Margaris, E. Kotsialos**, HELLAS

A Simple Algorithm For Reducing Time In Image Sequence Analysis, **K. Hryssagis**, HELLAS

17:00-18:20 **Session Implementations**

Session Chair **M. Neag and J.D. Angelopoulos**

A Generalized Architecture For Hardware Synthesis Of Spatio-Temporal Memory Models For Image Processing, **H. Norell, M. O'Niels**, SWEDEN

**A Low Power Scheduling Tool For SOC Designs, Mahdoum Ali, Badache Nadjib, Bessalah Hamid**, ALGERIE

A System Development Method For Global Active Noise Control, **S.M. Potirakis, M. Rangoussi**, HELLAS

Solid Of Split Ground In Adc Systems, **C. Castro-Serrato, A. Pechlaner, R. Gledhill, M. Omer**, GERMANY

Custom Network Processor Design For High-Performance Multiservice Access Concentrators, **A. Nikologiannis, Th. Orphanoudakis, I. Papaefstathiou, G. Kornaros, I. Mavroidis, N. Zervos**, HELLAS

Cad Tool For Optimized Design Of High-Performance Active Filters, **M. Neag, L. Nedelea, M. Topa, L. Festila**, ROMANIA

Metastability Parameters Evaluation By Dso Data Acquisition, **B. Medved Rogina, I. Michieli**, CROATIA

Implementation Of A Digital Maccontroller For Gigabit Pon Systems, **H. C. Leligou, J. D. Angelopoulos, Th. Orphanoudakis, G. Prezerakos**, HELLAS



## ***Detailed Schedule (continued)***

18:20-19:40 **Session Applications**

Session Chair **R.Stasinski and N. Assimakis**

High Resolution Image Restoration by New Super-Resolution Algorithm with Context-Switching Motion Estimator and Improved POCS-Based Reconstruction Stage, **K.Malczewski, R.Stasinski**, POLAND

Parallel Form of Multiuser Detection In CDMA Receivers, **D. Tapia, H. Perez, M. Nakano**, MEXICO

Application of a Robotic Arm to an Automated Multirecording Process, **G. K. Fourlas, A. Tzanis, G. Delaportas**, HELLAS

Extracting a Reference Singnal For Cardiac MRI Gating: Experimental Study For Wavlets Functions Choice, **O. Fukapu, D. Adi-Abdallah, A. Briguet**, FRANCE

Implementation of Opamps for Teaching of Electronic Neural Networks, **I. S. Halkiadis, N. E. Chasanagas**, HELLAS

Communication of Independent Robotic Groppers for Safe Hand-Over of Fragile Objects, **K. Kalovrektis, A. Gkotsinas, N. Glossas, N. Assimakis**, HELLAS

The Electrical Activity of the Heart and Analysis Low-Level Signals of the ECG, **S. Jurko, G. Rozinaj**, SLOVAKIA

Low Computational Algorithm for Obstacle Avoidance in Mobile Robotics Applications, **N. Katevas, S. Voliotis, I. Pappa, E. Vlachos**, HELLAS

HIV Reverse Transcriptase Gene, **P. D. Cristea, R. A. Tuduca, and D. Otelea**, ROMANIA