



14<sup>th</sup> International Conference on Systems, Signals and Image Processing,  
**IWSSIP 2007**  
and  
6<sup>th</sup> EURASIP Conference Focused on Speech and Image Processing,  
Multimedia Communications and Services  
**EC-SIPMCS 2007**

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## IWSSIP 2007 and EC-SIPMCS 2007 conferences program

The conferences will be hosted by the Faculty of Electrical Engineering and Computer Science, Smetanova ulica 17, Maribor. See the map at the end of program.

### Wednesday, 27 June 2007

8:00-18:00	Registration
9:00-9:30	Opening Ceremony
9:30-10:15	<b>Session KL1: Keynote Lecture 1</b> <b>KL1-1 Digital video Image Quality and Perceptual Coding</b> Prof. Dr. K. R. Rao, IEEE Fellow, University of Texas Arlington, USA.
10:15-10:30	Coffee Break
10:30-11:15	<b>Session KL1: Keynote Lecture 1</b> <b>KL1-2 Error Resilient Transmission of Video over Mobile Networks</b> Prof. Dr. M. Rupp, Vienna University of Technology, Austria.
11:15-11:30	Coffee Break
11:30-12:30	Presentation of industry R&D achievements.
12:30-13:30	Lunch Break
13:30-15:30	<b>Session S1: Signal Processing and Systems I</b> <b>Session S2: Signal Processing and Systems II</b> <b>Session S3: Image and Video Processing I</b>
15:30-15:45	Coffee Break
15:45-16:45	Round Table

### Thursday, 28 June 2007

8:00-18:00	Registration
9:00-11:00	<b>Session S4: Image and Video coding I</b> <b>Session S5: Image and Video Processing II</b> <b>Session S6: ICT and E-Learning</b>
11:00-11:15	Coffee Break
11:15-12:00	<b>Session KL2: Keynote Lecture 2</b> <b>KL2-1 An Overview of Research in 3DTV</b> Prof. Dr. L. Onural, Bilkent University, Ankara, Turkey.
12:00-12:15	Break
12:15-13:00	<b>Session KL2: Keynote Lecture 2</b> <b>KL2-2 Robust Recognition - by Parts Using Transduction and Boosting with Application to Biometrics</b> Prof. Dr. Harry Wechsler, George Mason University, USA.
13:00-14:00	Lunch Break
14:00-15:45	<b>Session S7: Artificial Intelligence and Technologies</b> <b>Session S8: Watermarking and Encryption</b> <b>IEEE Education Section meeting.</b>
16:00	<b>Social event: Short trip in the authentic surrounding with gala dinner.</b>

**Friday, 29 June 2007**

9:00-11:00	<b>Session S9: Signal Processing and Systems III</b>	<b>Session S10: Speech and Audio Processing</b>	<b>Session S11: Video Streaming, Conferencing and Broadcasting</b>
11:00-11:15	Coffee Break		
11:15-12:00	<b>Session TL1: Tutorial Lecture 1</b> <b>TL1-1 Overview of Multi-view Video Coding</b> Yo-Sung Ho, Kwan-Jung Oh, Gwangju Institute of Science and Technology, Korea		
12:00-12:15	Break		
12:15-13:00	<b>Session TL1: Tutorial Lecture 1</b> <b>TL1-2 Data Protection Technics, Cryptographic Protocols and PKI Systems in Modern Computer Networks</b> M. Marković, Security Department, Banca Intesa ad Beograd, Belgrade, Serbia		
13:00-14:00	Lunch Break		
14:00-14:45	<b>Session TL2: Tutorial Lecture 2</b> <b>TL2-1 Voice Quality Measurement in Modern Telecommunications Networks</b> A. E. Mahdi, University of Limerick, Limerick, Ireland		
14:45-15:00	Break		
15:00-15:45	<b>Session TL2: Tutorial Lecture 2</b> <b>TL2-2 Analysis of Fused Ophthalmologic Image Data</b> <i>J. Jan, L. Kubečka, R. Kolář and R. Chrastek1, Brno University of Technology, Czech Republic</i>		
15:45-16:00	Coffee Break		
16:00-18:00	<b>Session S12: Multimedia Communications, Networking and Services</b>	<b>Session S13: Multimedia and Multimedia Signal Processing</b>	<b>Session S14: Image and Video Processing III</b>

**Saturday, 30 June 2007**

9:00-11:00	<b>Session S15: Implementations and Applications</b>	<b>Session S16: Image scanning, Displaying and Printing and Applications</b>	<b>Session S17: Miscellaneous</b>
11:00-11:15	Coffee Break		
11:15-12:15	Presentation of R&D achievements of the Faculty of Electrical Engineering and Computer Science.		
12:15-12:45	Official closing of the conference scientific program and best student paper announcement.		
12:45-13:45	Lunch Break		
afternoon	Meeting of the conference international program committee. <b>Social event: Guided town Maribor tour and visiting of the Festival Lent 2007</b>		

## Session KL1: Keynote Lecture 1

KL1-1 Digital Video Image Quality and Perceptual Coding

*K. R. Rao*  
University of Texas Arlington, USA

KL1-2 Error Resilient Transmission of Video over Mobile Networks

*M. Rupp*  
Vienna University of Technology, Austria

## Session KL2: Keynote Lecture 2

KL2-1 An Overview of Research in 3DTV

*L. Onural*  
Bilkent University, Ankara, Turkey

KL2-2 Robust Recognition-by-Parts Using Transduction and Boosting with Applications to Biometrics

*H. Wechsler*  
George Mason University, Fairfax, Virginia, USA

## Session TL1: Tutorial Lecture 1

TL1-1 Overview of Multi-view Video Coding

*Yo-Sung Ho, Kwan-Jung Oh*  
Gwangju Institute of Science and Technology, Korea

TL1-2 Data Protection Technics, Cryptographic Protocols and PKI Systems in Modern Computer Networks

*M. Marković*  
Security Department, Banca Intesa ad Beograd, Belgrade, Serbia

## Session TL2: Tutorial Lecture 2

TL2-1 Voice Quality Measurement in Modern Telecommunications Networks

*A. E. Mahdi*  
University of Limerick, Limerick, Ireland

TL2-2 Analysis of Fused Ophthalmologic Image Data

*J. Jan, L. Kubečka, R. Kolář and R. Chrastek*  
Brno University of Technology, Czech Republic

## Session S1: Signal Processing and Systems I

- S1-01      **Signal estimation from uncertain observations coming from multiple sensors**  
*R. Caballero-Águila<sup>2</sup>, Aurora Hermoso-Carazo<sup>1</sup>, J. D. Jiménez López<sup>1</sup>, J. Linares-Pérez<sup>2</sup>*  
<sup>1</sup>Universidad de Jaén, <sup>2</sup>Universidad de Granada, Spain
- S1-02      **New filtering algorithm using observations with one or two-step random delay**  
*R. Caballero-Águila<sup>2</sup>, A. Hermoso-Carazo<sup>1</sup>, J. D. Jiménez-López<sup>1</sup>, J. Linares-Pérez<sup>2</sup>*  
<sup>1</sup>Universidad de Jaén, <sup>2</sup>Universidad de Granada, Spain
- S1-03      **Threshold Estimation for Wavelet Domain Filtering of Signal-dependent Noise**  
*Mitko Kostov, Cvetko Mitrovski, and Momcilo Bogdanov*  
Faculty of Technical Sciences, Bitola, Macedonia
- S1-04      **An Example of Adaptive Sampling and Reconstruction of Signals: Application of Chaikin's Algorithm**  
*Mile Petkovski, Sofija Bogdanova, Momcilo Bogdanov*  
Faculty of Technical Sciences, Bitola, Macedonia
- S1-05      **Partial Realization of a Generalized Transfer Function**  
*Fragulis George<sup>2</sup>, P.K. Sotiropoulos<sup>3</sup> and B.G. Mertzios<sup>1</sup>*  
<sup>1</sup>Thessaloniki Institute of Technology , Dept. of Automation, THESSALONIKI, Greece,  
<sup>2</sup>Western Macedonia Institute of Technology , Dept. of Computer Science &  
Mathematics,KOZANI, Greece,      <sup>3</sup>Educational Technology Laboratory, Cultural and  
Educational Technology Institute (CETI), Centre of Integrated Research for the Information  
Society (I.R.I.S.), Xanthi,Hellas
- S1-06      **Extracting Self-affine (Fractal) Features from Physiologic Signals**  
*Ivan Michieli, Branka Medved Rogina*  
Division of Electronics,Ruder Bošković Institute, Croatia

## Session S2: Signal Processing and Systems II

- S2-01      [Analysis of Electrocardiograms Using the Convolution Kernel Compensation Approach](#)  
*Damjan Zazula<sup>1</sup>, Aleš Holobar<sup>1</sup>, Franck Angely<sup>2</sup>*  
<sup>1</sup>University of Maribor, Slovenia, <sup>2</sup>Ecole Centrale de Nantes, France
- S2-02      [Genomic Signal Analysis of MT Mutations Resulting in RMP Resistance](#)  
*Paul Cristea<sup>1</sup>, Rodica Tuduce<sup>2</sup>, Dorina Banica<sup>3</sup>*  
<sup>1</sup>Bio-Medical Engineering Center, University "Politehnica" of Bucharest, Romania,  
<sup>2</sup>ETRO Department, Vrije Universiteit Brussel, Belgium, <sup>3</sup> National Institute of Pneumo-  
Phtysiology, Bucharest, Romania
- S2-03      [ANN Prediction of Nucleotide Sequences Link of Principal Component Analysis to Fourier Transform](#)  
*Paul Cristea, Rudi Deklerck, Jan Cornelis, Rodica Tuduce, Iulian Nastac, Marius Andrei*  
Bio-Medical Engineering Center, University "Politehnica" of Bucharest, Romania
- S2-04      [Mammographic lesions discrimination based on fractal dimension as an indicator](#)  
*Daniela Alexandra Crisan<sup>1</sup>, Radu Dobrescu<sup>2</sup>, Peter Planinšič<sup>3</sup>*  
<sup>1</sup>Romanian-American University, Bucharest, Romania,  
<sup>2</sup>POLITEHNICA” University, Bucharest, Romania,  
<sup>3</sup>University of Maribor, SLOVENIA
- S2-05      [Estimating the parameters of measured self similar traffic for modeling in OPNET](#)  
*M. Fras, J. Mohorko*  
University of Maribor, Faculty of Electrical Engineering and Computer Science, Maribor,  
Slovenia
- S2-06      [Using Fractal Dimension as Texture Discriminator for Content Base Image Retrieval](#)  
*Radu Dobrescu, Stefan Mocanu*  
POLITEHNICA University of Bucharest, Romania

## Session S3: Image and Video Processing I

### S3-01 Perceptual Contrast Estimation for Color Edge Detection

*Kuo-Cheng Liu<sup>2</sup>, Chun-Hsien Chow<sup>1</sup>*

<sup>1</sup>Department of Electrical Engineering, Tatung University, Taiwan,

<sup>2</sup>Taiwan Hospitality and Tourism College

### S3-02 Recursive filtering algorithm to estimate images observed by signal-dependent colored noise

*García-Ligero MaríaJesús<sup>1</sup>, A. Hermoso-Carazo<sup>1</sup>, J. Linares-Pérez<sup>1</sup>, S. Nakamori<sup>2</sup>*

<sup>1</sup>Universidad de Granada, Spain,

<sup>2</sup>University of Kagoshima, Faculty of Education, Japan

### S3-03 Significance of Region of Interest applied on CT Image in TeleRadiology-Telemedicine

*Pervez Akhtar<sup>1</sup>, Muhammad Iqbal Bhatti<sup>2</sup>, Tariq Javid Ali<sup>3</sup>, Muhammad Abdul Muqee<sup>4</sup>*

<sup>1</sup>National University of Sciences and Technology,

<sup>2</sup>Sir Syed University of Engineering and Technology,

<sup>3</sup>National University of Sciences and Technology,

<sup>4</sup> Sir Syed University of Engineering and Technology

### S3-04 An Improved JPEG Compression Scheme Using Human Visual System Model

*G. Sreelekha, P.S.Sathidevi*

National Institute of Technology, Calicut, Kerala, India

### S3-05 An Efficient View Interpolation Scheme and Coding Method for Multi-view Video Coding

*Cheon Lee, Kwan-Jung Oh, Seung-Hwan Kim, and Yo-Sung Ho*

Gwangju Institute of Science and Technology (GIST), Korea

### S3-06 Thermal and Visual Image Registration in Hough Parameter Space

*Rok Istenic<sup>1</sup>, Dusan Heric<sup>1</sup>, Slobodan Ribaric<sup>2</sup>, Damjan Zazula<sup>1</sup>*

<sup>1</sup>Faculty of Electrical Engineering and Computer Science, University of Maribor, Slovenia,

<sup>2</sup>Faculty of Electrical Engineering and Computing, University of Zagreb, Croatia

### S3-07 Image interepolation Method Based on Wavelets

*Emil Dumic, Sonja Grgic, Mislav Grgic*

University of Zagreb, Croatia

## Session S4: Image and Video coding I

### S4-01 A Novel Metric for H.264/AVC No-Reference Quality Assessment

*Martin Slanina<sup>1</sup>, Vaclav Ricny<sup>1</sup>, R. Forchheimer<sup>2</sup>*

<sup>1</sup>Institute of Radio Electronics, Czech Republic,

<sup>2</sup>Faculty of Electrical Engineering, Image Coding Group, Sweden

### S4-02 Video Object Extraction Using Model Matching Technique: A Novel Approach

*G. Kavitha, M. Dinesh Chandra, J. Shanmugam*

Madras Institute of Technology, Anna University, India

### S4-03 A Scale-dependent Morphological Approach to Motion Segmentation

*L B. Dorini, N. C. Simões, N. J. Leite*

Universidade Estadual de Campinas, Instituto de Computação, Campinas, SP, Brasil

### S4-04 Algorithm-level Optimization for Real-time H.264/AVC Encoder

*Seung-Hwan Kim, Yo-Sung Ho*

Gwangju Institute of Science and Technology, Korea

### S4-05 Texture Matching Method for Lossless Image Coding

*Grzegorz Ulacha<sup>2</sup>, Ryszard Stasiński<sup>1</sup>*

<sup>1</sup>Department of Computer Science, <sup>2</sup>Department of Electronics and Telecommunications,

<sup>1</sup>Szczecin University of Technology, <sup>2</sup>Poznań University of Technology, Poland

### S4-06 Adaptive Compression of Compound Images

*Roumen Kountchev<sup>1</sup>, Mariofanna Milanova<sup>2</sup>, Vladimir Todorov<sup>3</sup>, Roumiana Kountcheva<sup>3</sup>*

<sup>1</sup>Radiocommunications Dept. Technical University, Sofia, Bulgaria,

<sup>2</sup>Computer Science Dept. UALR USA,

<sup>3</sup>T&K Engineering, Sofia, Bulgaria

## Session S5: Image and Video Processing II

### S5-01 Palmprint Image Quality Measures in Minutiae-based Recognition

*Yan Zheng<sup>1</sup>, GuangShun Shi<sup>1</sup>, Lin Zhang<sup>2</sup>, QingRen Wang<sup>1</sup>*

<sup>1</sup>Institute of Machine Intelligence, NanKai University, China,

<sup>2</sup>Institute of Criminology Technology, P.R.China

### S5-02 Super-resolution image reconstruction employing Kriging interpolation technique

*Antigoni Panagiotopoulou, Vassilis Anastassopoulos*

Electronics Laboratory, Physics Department, University of Patras, Greece

### S5-03 Towards Face Recognition in JPEG2000 Compressed Domain

*Kresimir Delac, Mislav Grgic, Sonja Grgic*

University of Zagreb, Faculty of Electrical Engineering and Computing, Department of Wireless Communications, Croatia

### S5-04 Fast Computation of orthogonal Fourier Mellin Moments using Modified Direct Method

*George A. Papakostas<sup>1</sup>, Y. S. Boutalis<sup>1</sup>;D. A. Karras<sup>2</sup>;B. G. Mertzios<sup>3</sup>*

<sup>1</sup>Department of Electrical and Computer Engineering, Democritus University of Thrace, Greece,

<sup>2</sup>Department of Automation, Chalkis Institute of Technology, Chalkida, Greece,

<sup>3</sup>Department of Automation, Laboratory of Control Systems. and Comp. Intell., Thessaloniki Institute of Technology, Thessaloniki, Hellas

### S5-05 Reducing the Foreground Aperture Problem in Mixture of Gaussians Based Motion Detection

*Ákos Utasi, László Czúni*

Department of Image Processing and Neurocomputing, University of Pannonia, Hungary

### S5-06 Chromatic Enhancement Technique for JPEG Image

*Giuseppe Spampinato, A. Castorina, A. Bruna, A. Capra*

Advanced System Technology, ST Microelectronics, Italy



## Session S6: ICT and E-Learning

S6-01 [Influence of the use of the MATLAB as an underlying technology on the development of the curriculum for the course in signals and systems](#)

*Radojka Krneta, Miroslav Bjekić, Adam Dostanić, Marko Acović*  
University of Kragujevac, Technical faculty in Čačak, Serbia

S6-02 [Online Learning System for Biomedical Engineering](#)

*G-Thiago Fonseca, João Batista Destro Filho, Tatiane Vieira Borges*  
Federal University of Uberlândia (UFU), Brazil

S6-03 [Bridging the gap between digital technology and science education](#)

*Garyfallido Despinau, G. S. Ioannidis*  
University of Patras, Greece

S6-04 [Developing Collaborative Learning Model in DSP Courses](#)

*DimitarTaskovski, Vlado Kitanovski, Sofija Bogdanov*  
University Ss Cyril and Methodius, Skopje

S6-05 [The Structure of the Pyramidia E-learning Tool - the Programmer's Point of View](#)

*I. Miletic, P. Pale, H. Pandzic, H. Bogunovic, B. Jeren*  
University of Zagreb, Croatia

S6-06 [E-learning in Croatia: Possibility of mobile multimedia systems for distance learning](#)

*Irena Vuksanović<sup>1</sup>, Branka Zovko Cihlar<sup>2</sup>, Damir Boras<sup>3</sup>*

<sup>1</sup>Council for Electronic Media, Zagreb, Croatia,

<sup>2</sup> Faculty of Electrical Engineering and Computing , Department of Wireless Communications, Croatia,

<sup>3</sup>Faculty of Philosophy, Department of Information Sciences, Zagreb, Croatia

S6-07 [A formal approach to hypervideo design](#)

*Samra Mujačić<sup>1</sup>, Matjaž Debevc<sup>2</sup>*

<sup>1</sup>University Centre for Distance Education Development, University of Tuzla, BIH,

<sup>2</sup>University of Maribor, Faculty of Electrical Engineering and Computer Sciences, Maribor, Slovenia

## Session S7: Artificial Intelligence and Technologies

S7-01 ANN Flexible Forecasting for the Adaptive Monitoring of a Multi-Tube Reactor

*Iulian Nastac, Paul Cristea*

Polytechnic University of Bucharest, Romania

S7-02 Shot Boundary Detection by a Hierarchical Supervised Approach

*Guillermo Camara-Chavez<sup>2</sup>, F. Precioso, M. Cord, S. Phillipp-Foliguet, A. de A. Araujo<sup>1</sup>*

<sup>1</sup>Equipe Traitement des Images et du Signal-ENSE, France,

<sup>2</sup>Federal University of Minas Gerais, Computer Science Department, Brazil

S7-03 Highly Compressed Zernike Moments by Smoothing

*GeorgePapakostas<sup>1</sup>, Y.S. Boutalis<sup>1</sup>;D. A. Karras<sup>2</sup>;B. G. Mertzios<sup>3</sup>,*

<sup>1</sup>Department of Electrical and Computer Engineering, Democritus University of Thrace, Greece

<sup>2</sup>Department of Automation, Chalkis Institute of Technology, Chalkida, Greece,

<sup>3</sup>Department of Automation, Laboratory of Control Systems. and Comp. Intell., Thessaloniki Institute of Technology, Thessaloniki, Greece

S7-04 Looking for Intelligent Image Treatment and Manipulation: An Information Processing Approach

*Emanuel Diamant*

VIDIA-mant, Israel

S7-05 Environmental Intelligence Based on Advanced Sensor Networks

*Darko Stipanicev, Ljiljana Bodrozic, Maja Stula*

University of Split - Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Croatia

S7-06 Step Integration based Fusion Algorithm for Multimodal Biometrics

*Aayush Sharma*

Department of Electrical Engineering, Indian Institute of Technology, Roorkee – India

S7-07 A KD-Tree Based Non-Intrusive Speech Quality Evaluation for Telephony Systems

*Abdulhussain E. Mahdi, Timothy Murphy*

Department of Electronic & Computer Engineering, University of Limerick, Ireland

## Session S8: Watermarking and Encryption

- S8-01      [Watermarking of audio signals using adaptive subband filtering and Manchester signaling](#)  
*Przemyslaw Dymarski*  
Warsaw University of Technology, Department of Electronics and Information Technology,  
Institute of Telecommunications, Warsaw, Poland
- S8-02      [Semi-Fragile Watermarking Scheme for Authentication of MPEG-1/2 Coded Videos](#)  
*Vlado Kitanovski, Dimitar Taskovski, Sofija Bogdanova*  
Department of Electronics, Faculty of Electrical Engineering and Information Technologies,  
Skopje, Republic of Macedonia
- S8-03      [On Optimization of Miller-Rabin Primality Test on TI TMS320C54x Signal Processors](#)  
*Goran Đorđević<sup>1</sup>, Dr. Milan Marković<sup>2</sup>*  
<sup>1</sup>Institute for manufacturing banknotes and coins NBS, Belgrade, Serbia,  
<sup>2</sup>Banca Intesa ad Beograd, Belgrade, Serbia
- S8-04      [The new watermarking scheme with error-correction codes](#)  
*Petr Číka,*  
Brno University of Technology, Czech Republic
- S8-05      [A Benchmark for Medical Image Watermarking](#)  
*K. A Navas<sup>1</sup>, M. Sasikumar<sup>2</sup>, S. Sreevidya<sup>1</sup>*  
<sup>1</sup>College of Engineering Trivandrum, Kerala, India,  
<sup>2</sup>Marian Engineering College, Kerala, India,
- S8-06      [An Efficient Lossless Data Hiding Technique for Palette-Based Images with Capacity Optimization](#)  
*Noura Saleh<sup>1</sup>, Hoda N. Boghdady<sup>1</sup>, Samir I. Shaheen<sup>2</sup> and Ahmed M. Darwish<sup>2</sup>*  
<sup>1</sup>National Telecommunication Institute, Cairo, Egypt,  
<sup>2</sup>Computer Engineering Department, Faculty of Engineering, Cairo University
- S8-07      [Best Watermarking Selection for Free-View Point Television](#)  
*Evlambios E. Apostolidis<sup>1</sup>, Alper Koz<sup>1</sup> and Georgios Triantafyllidis<sup>2</sup>*  
<sup>1</sup>Informatics and Telematics Institute, Thessaloniki, Greece,  
<sup>2</sup>Middle East Technical University, Ankara, Turkey

## Session S9: Signal Processing and Systems III

### S9-01 OFDM PAPR reduction by combination of Interleaving with Repeated clipping and filtering

*Josef Urban, Roman Marsalek*

Department of Radio Electronics, Brno University of Technology, Brno, Czech Republic

### S9-02 2-stage Blind Receiver Based on the CM algorithm for MC-CDMA Signals Detection over the 3-states Channel Model

*Lubomir Copjan, Jozef Krahulec, Stanislav Marchevsky, Stanislav Benco*

Department of Electronics and Multimedia Communications, Technical University of Kosice, Slovak Republic

### S9 -03 Methodology of Path Loss Calculation using Measurement Results

*Winton Afrić<sup>1</sup>, Branka Zovko- Cihlar<sup>2</sup>, Sonja Grgić<sup>2</sup>*

<sup>1</sup>Croatian Telecom, Strategy and Network Planning Department, Zagreb, Croatia,

<sup>2</sup>University of Zagreb, Faculty of EE and Comp, Zagreb, Croatia

### S9-04 Modeling and Implementation of the Complex Telecommunication Systems using the LabView 8.2

*Taima Kapetanović<sup>1</sup>, Amir Kapetanović<sup>2</sup>*

<sup>1</sup>BIgBugDSP LLC, Cheyenne, USA,

<sup>2</sup>Herschel Technologies Inc, Santa Clara, USA

### S9-05 Modeling of Middle-range Metallic Lines for Ethernet with VDMT

*Jiří Vodrážka, Petr Jareš, Tomáš Prokop*

Department of Telecommunication Engineering, Czech Technical University in Prague, Faculty of Electrical Engineering, Praha, Czech Republic

### S9-06 Architecture of Transform Based Invariant Feature Memory

*Ján Turán, Ľuboš Ovseník*

Department of Electronics and Multimedia Communications, University of Technology Košice, Slovak Republic

### S9-07 Wireless Sensor Network Wavelet Signal Processing

*A. Dostanic, A. Peulic, S. Randjic, U. Pesovic*

Technical Faculty Cacak University of Kragujevac, Serbia

## Session S10: Speech and Audio Processing

S10-01 Application of Speaking Style Conversion in the Czech and Slovak TTS System with Cepstral Description

*Jiří Přibíl<sup>1</sup>, Ing. Anna Přibilová<sup>2</sup>*

<sup>1</sup>Institute of Photonics and Electronics, Academy of Sciences CR, Czech Republic,

<sup>2</sup>Slovak University of Technology, Slovakia

S10-02 MABox - Multimodal Microphone Array Algorithm Development System

*Jan Vrabec, Gregor Rozinaj, Juraj Vojtko*

Slovak University of Technology, Slovakia

S10-03 Noise Reduction Algorithm for Robust Speech Recognition Using Minimum Statistics Method and Neural Network VAD

*Marko Kos,*

University of Maribor, Slovenia

S10-04 Influence of features extraction methods in Performance of Continuous speech Recognition for Romanian

*Corneliu Octavian DUMITRU, Inge GAVAT*

University POLITEHNICA Bucharest, Romania

S10-05 Speech sampling by level-crossing and its reconstruction using spline-based filtering

*Modris Greitans, R.Shavelis*

Institute of Electronics and Computer Science, Latvia

S10-06 Tone Discrimination in Mandarin Chinese

*I. V. McLoughlin*

Nanyang Technological University, Singapore

S10-07 ASR for Romanian Language

*Inge Gavata, Corneliu Octavian DUMITRU*

University POLITEHNICA Bucharest, Romania

## Session S11: Video Streaming, Conferencing and Broadcasting

S11-01 Influence of the Baseband Transmission Channel Cut-off Parameter on the Transmission Quality in DVB Baseband Processing

*Tomáš Kratochvíl*

Brno University of Technology, Czech Republic

S11-02 Image reception and control of IP-cam via digital video broadcasting

*Petr Číka, Vít Novotný, Ivan Dirbák*

Brno University of Technology, Czech Republic

S11-03 Using Telecommunications Middleware to Dynamically Adapt Multimedia Services

*José Manuel Oliveira<sup>1,2</sup>, Eurico Carrapatoso<sup>1,3</sup>*

<sup>1</sup>Instituto de Engenharia de Sistemas e Computadores do Porto, Portugal,

<sup>2</sup>Faculdade de Economia da Universidade do Porto, Portugal,

<sup>3</sup>Faculdade de Engenharia da Universidade do Porto, Portugal

S11-04 Complementary Code Keying Implementation in the Wireless Networking

*Jan Mikulka, Stanislav Hanus*

Brno University of Technology, Czech Republic

S11-05 Location Technologies for Mobile Networks

*Tomislav Kos<sup>1</sup>, Mislav Grgic<sup>1</sup>, Jakov Kitarovic<sup>2</sup>*

<sup>1</sup>Faculty of Electrical Engineering and Computing, University of Zagreb, Croatia,

<sup>2</sup>Faculty of Maritime Studies, University of Rijeka, Croatia

S11-06 Sub-Shots - Basic Units of Video

*Christian Petersohn*

Technical University Berlin, Germany

S11-07 Introducing a Framework to Create Telephony Speech Databases from Direct Ones

*Saeedeh Momtazi, Hossein Sameti, Saman Vaisipour, Meysam Tefagh*

Sharif University of Technology, Iran

## Session S12: Multimedia Communications, Networking and Services

- S12-01 [Open issues in Wireless Visual Sensor Networking](#)  
*Theodore Zahariadis, Stamatis Voliotis*  
Technological Educational Institute of Chalkida, Greece
- S12-02 [Internet Protocol Multimedia Subsystem for Mobile Services](#)  
*Bojan Bakmaz, Zoran Bojkovic and Miodrag Bakmaz*  
University of Belgrade, Serbia
- S12-03 [Proposed use of a CDMA technique in wireless sensor networks](#)  
*Karl Benkic*  
University of Maribor, Slovenia
- S12-04 [ZigBee wireless network performance analysis and electromagnetic fields modeling](#)  
*Aleksandar Peulic<sup>1</sup>, U. Pesovic<sup>1</sup>, Ž. Čučej<sup>2</sup>*  
<sup>1</sup>University of Kragujevac, Serbia,  
<sup>2</sup>University of Maribor, Slovenia
- S12-05 [Panoramic Scanned Page Using Mobile Phone Camera](#)  
*Naveed Iqbal Rao, Huijun Di, GuangYou Xu*  
Tsinghua University, China
- S12-06 [Qualitative Comparative Data Fusion analysis to Multiresolution approach](#)  
*S.Senthilkumar<sup>1</sup>, S. Muttan<sup>2</sup>, G.Ragunathan<sup>1</sup>*  
<sup>1</sup>St. Joseph's College of Engineering, Chennai,  
<sup>2</sup>Anna University, Chennai
- S12-07 [Position Monitoring using Smart Wireless Network System](#)  
*N. Zdravkovic<sup>1</sup>, A. Peulic<sup>2</sup>*  
<sup>1</sup>Faculty of Information Technology, Belgrade, Serbia,  
<sup>2</sup>Technical Faculty, Belgrade, Serbia

## Session S13: Multimedia and Multimedia Signal Processing

### S13-01 Human lips synchronisation in Autodesk Maya

*António Moura<sup>1</sup>, Ingrida Mažonavičiūtė<sup>1,2</sup>, João Nunes<sup>1</sup>, Justinas Grigaravičius<sup>1,2</sup>*

<sup>1</sup>Instituto Politécnico de Viana do Castelo, Portugal,

<sup>2</sup>Vilnius Gediminas Technical University, Lithuania

### S13-02 Scene Change Detection Using DCT Features in Transform Domain Video Indexing

*S. Primechaev, A. Frolov and B. Šimák*

Czech Technical University in Prague, Czech Republic

### S13-03 Combining Novel Features for Content Based Image Retrieval

*K.Satya Sai Prakash<sup>2</sup>, RMD Sundaram Ramanathan<sup>1</sup>*

<sup>1</sup>Wipro Technologies, India,

<sup>2</sup>Department of Computer Science and Engineering, India

### S13-04 Content-Based Image Retrieving Improved by Pixel-Based Search

*Igor Stojanovic, Sofija Bogdanova and Momcilo Bogdanov*

Faculty of Electrical Engineering and Information Technologies, Macedonia

### S13-05 Phase-based Motion Estimation for Noisy Sequences

*Vittoria Bruni, Daniela De Canditiis, Domenico Vitulano*

Istituto per le Applicazioni del Calcolo "M.Picone", Italy

### S13-06 Comparison of Background Subtraction Methods for a Multimedia Application

*Fida El Baf, Thierry Bouwmans, Bertrand Vachon*

University of La Rochelle, France

### S13-07 Comparison of PLC Methods Used in VoIP Networks

*Zdenek Becvar, Jan Zelenka, Miloslav Brada, Lukas Novak*

Department of Telecommunication Engineering, Czech Technical University, Czech Republic



## Session S14: Image and Video Processing III

- S14-01     **Scratches Removal in Digitised Aerial Photos Concerning Sicilian Territory**  
*E. Ardizzone, H. Dindo, O. Gambino, G. Mazzola*  
Università degli Studi di Palermo, Italy
- S14-02     **Image Denoising Using Two-Dimensional GARCH Model**  
*Maryam Amirmazlaghani, Hamidreza Amindavar*  
Department of Electrical Engineering, Iran
- S14-03     **Motion vector composition algorithm in H.264 transcoding**  
*Francesca Lonetti<sup>1</sup>, Francesca Martelli<sup>2</sup>*  
<sup>1</sup>Istituto di Scienza e Tecnologie dell'Informazione "Alessandro Faedo", Italy,  
<sup>2</sup>Università di Pisa, Italy
- S14-04     **A Comparative study of various MCC detection Methods in Digitized mammograms**  
*K. Kavitha, N. Kumaravel*  
Anna University, India
- S14-05     **A contrario False Alarms Removal for Improving Blotch Detection in Digitized Films Restoration**  
*Sorin Tilie<sup>1</sup>, Louis Laborelli<sup>1</sup>, Isabelle Bloch<sup>2</sup>*  
<sup>1</sup>DRE, INA, France,  
<sup>2</sup>GET-ENST, France
- S14-06     **A Fast Hue-Preserving Histogram Equalization Method for Color Image Enhancement using a Bayesian Framework**  
*David Menotti<sup>1,2</sup>, Laurent Najman<sup>3</sup>, Arnaldo de Albuquerque Araujo<sup>1</sup>, Jacques Facon<sup>2</sup>*  
<sup>1</sup>Universidade Federal de Minas Gerais, Brazil,  
<sup>2</sup>Pontifícia Universidade Católica do Paraná, Brazil,  
<sup>3</sup>Université de Marne-la-Vallée, France
- S14-07     **Multi-stream Asynchrony Dynamic Bayesian Network Model for Audio-Visual Continuous Speech Recognition**  
*Guoyun Lv<sup>1</sup>, Dongmei Jiang<sup>1</sup>, Rongchun Zhao<sup>1</sup>, Xiaoyue Jiang<sup>1</sup>, H. Sahli<sup>2</sup>*  
<sup>1</sup>Northwestern Polytechnical University, China  
<sup>2</sup>Vrije Universiteit Brussel, Belgium

## Session S15: Implementations and Applications

### S15-01 License Plate Localization and Storage Method

*Balázs Enyedi<sup>1</sup>, Lajos Konyha<sup>1</sup>, Kálmán Fazekas<sup>1</sup>, Jan Turán<sup>2</sup>*

<sup>1</sup>Budapest University of Technology and Economics, Hungary,

<sup>2</sup>University of Technology Košice, Slovak Republic

### S15-02 Edge-based Extraction of a Grasped Object with Retina-like Sensor

*Tomoyuki Yamaguchi<sup>1</sup>, Shuji Hashimoto<sup>1</sup>, Fabio Berton<sup>2</sup>, Giulio Sandini<sup>2</sup>*

<sup>1</sup>Waseda University, Japan,

<sup>2</sup>University of Genoa, Italy

### S15-03 Efficient Implementation of VC-1 Decoder on Texas Instrument's OMAP2420 – IVA

*R. Lakshmish, Praveen K. Y., Kausik Maiti, Jayaprakash Pai and Tushar K. Adhikary*  
Emuzed - An Aricent Company, India

### S15-04 Basic C Code Implementations for AVR Microcontrollers

*Tomas Fryza,*

Brno University of Technology

### S15-05 An Off-line Electronic Cash System Based on Bilinear Pairings

*Constantin Popescu, Horea Oros*

University of Oradea, Romania

### S15-06 Automatic Detection of Accretion of Glaucoma in Eye

*Rajesh Balaraman, Shankar Ramanathan*

St. Joseph's College of Engineering (Affiliated to Anna University), India

### S15-07 Modeling methods in OPNET simulations of Tactical Command and Control Information System

*J. Mohorko, M. Fras, Ž. Čučej*

University of Maribor, Slovenia

## Session S16: Image scanning, Displaying and Printing and Applications

- S16-01    **Fast displacement estimators for freehand ultrasonic strain imaging**  
*Andreas Eder, Christian Kargel*  
Carinthia University of Applied Sciences, Austria
- S16-02    **Optimisation of Image Registration for Print Quality Control**  
*Jurij Rakun, Damjan Zazula*  
University of Maribor, Slovenia
- S16-03    **Different Color Attributes between Hard-copy and Soft-copy Images**  
*Lidija Mandić<sup>1</sup>, Sonja Grgić<sup>2</sup>, Tomislav Kos<sup>2</sup>*  
<sup>1</sup>University of Zagreb, Faculty of Graphic Arts, Croatia,  
<sup>2</sup>University of Zagreb, Faculty of Electrical Engineering and Computing, Croatia
- S16-04    **Cardiac Structure Recognition in Ultrasound Images**  
*Mozart Lemos de Siqueira<sup>1,2</sup>, Daniel Nehme Müller<sup>1</sup> and Philippe Olivier Alexandre Navaux<sup>1</sup>*  
<sup>1</sup>Federal University of Rio Grande do Sul, Brazil,  
<sup>2</sup>Centro Universitário Ritter do Reis, Brazil
- S16-05    **Analysis and diagnostics of the brain-stem ultrasound images**  
*Josef Schreiber, Edurad Sojka, Lacezar Licev*  
Technical University of Ostrava, Czech Republic
- S16-06    **Algorithms and Techniques for Image to Sound Conversion for Helping the Visually Impaired People – Application Proposal**  
*Alexandru Cazan, Radu Varbanescu, Dan Popescu*  
University Politehnica of Bucharest, Romania
- S16-07    **Relevance of Earth Observation Images Information Mining to Humanitarian Crisis Management**  
*D. Faur, I. Gavat, M. Datcu*  
University Politehnica of Bucharest, Romania

## Session S17: Miscellaneous

- S17-01    [KaTaLyzer – framework for Ethernet traffic analysis](#)  
*Ivan Kotuliak, S. Bočinec, R. Benkovič*  
University of Technology Košice, Slovak Republic
- S17-02    [Comparative analysis of paper and pencil and computer based tests regarding didactical and psychological aspects](#)  
*Marjan Milošević*  
Technical Faculty Čačak, Serbia
- S17-03    [Separation of Vowel and Consonant from Esophageal Speech](#)  
*Rintaro Ogane, Futoshi Sugimoto, Masahide Yoneyama*  
Toyo University, Japan
- S17-04    [Transmission Efficiency of Current Communications Systems](#)  
*Peter Truchly, Marek Beragg*  
Slovak University Technology, Slovakia
- S17-05    [Spoken Emotion Classification Using ToBI Features and GMM](#)  
*Alexander Iliev, Yongxin Zhang, Michael Scordilis*  
University of Miami, USA
- S17-06    [Intonation modeling of Slovak Speech Using MOMEL/INTSINT Framework](#)  
*A. Palenik, J. Čepko, M. Turi Nagy*  
Slovak University Technology, Slovakia
- S17-07    [Matching Local Invariant Features: How Can Contextual Information Help?](#)  
*Desire Sidibe, Philippe Montesinos, Stefan Janaqi*  
LGI2P – Ecole des Mines Ales, France
- S17-08    [A Modified MASPER Training Procedure for ASR Systems and its Performance on Slovak MOBILDAT Database](#)  
*Juraj Kacur, Michal Ceresna*  
Slovak University Technology, Slovakia



