

**International Symposium on Electronics and
Telecommunications
ISETC '10
Ninth Edition
Preliminary Program**

Thursday, November 11th

**8⁰⁰-9³⁰ and 12⁰⁰-16³⁰ Registration – Faculty of Electronics and
Telecommunications room A018**

09³⁰ -12⁰⁰ Opening plenary session room D1

- Welcome speech - Prof. Dr. Eng. Marius Ottesteanu, Dean of the Faculty of Electronics and Telecommunications
- Keynote speaker: Dr. Christian von Albrichsfeld, CEO Continental Automotive Timisoara
- Keynote speaker: Iulian Costea - Chief Marketing Officer Alcatel-Lucent South East Europe
- Keynote speaker: Prof. Ioannis Pitas, Aristotle University of Thessaloniki and CERTH/ITI, Greece, **Human centered Video Analysis For Multimedia Postproduction**

12⁰⁰-12³⁰ Coffee break

12³⁰-19³⁰ Afternoon sessions with a 15 minutes coffee break at 15⁴⁵.

20³⁰ Gala dinner - CPII Restaurant

Friday, November 12th

09⁰⁰-14⁰⁰ Morning session with a 15 minutes coffee break at 11⁰⁰.

Thursday, November 11th

Room A105 12³⁰ – 15⁴⁵ COMMUNICATIONS 1

Chairmen:

Prof. Dr. Eng. Katsumi Sakakibara

S.I. Dr. Eng. Cornel Balint

1. Long Term Evolution Primary Synchronization Algorithms

Alexandru Andreescu, Alexandru Ghita, Andrei Alexandru Enescu, Cristian Anghel

2. Achieving Secondary Synchronization for Downlink in the Long Term Evolution Standard

Mihai Bartis, Vlad Mocanu, Andrei Alexandru Enescu, Cristian Anghel

3. A physical layer simulator for WiMAX

Marius Oltean, Maria Kovaci, Jamal Mountassir, Alexandru Isar, Petru Lazar

4. A Handover Scheme for Broadband Wireless Mobile Networks

Dimitar Radev, Ivan Kurtev, Dragan Stankovski, Svetlana Siarova

5. Outage Probability of Cooperative Multi-Hop Relay Networks with MDS Codes at Link-Level

Katsumi Sakakibara, Daichi Ito, Jumpei Taketsugu

6. Low-Power Wireless Transceiver – Total Channel-Loss Based Power Consumption Model

Nikola Zogovic, Goran Dimic, Dragana Bajic

7. A Study of the Permutation Schemes Used in Mobile Wireless Communications

Ioan Eugen Andor, Lucian Ardelean, Horia Balta, Maria Kovaci, Marius Oltean

8. Scheduling Techniques Evaluation in LTE systems with Mixed Data Traffic

Cornel Balint, Georgeta Budura, Eugen Marza

9. WiMAX versus LTE; An overview of technical aspects for Next Generation Networks technologies

Vasile Horia Muntean, Marius Ottesteanu

10. Network Management Extensions, Performing Network Management Activities

Mihnea A. Magheti, Andrei N. Ciobanu, Eduard C. Popovici

Room A106 12³⁰ – 15⁴⁵ COMMUNICATIONS 2

Chairmen:

Prof. Dr. Eng. Victor Croitoru

Prof. Dr. Eng. Virgil Dobrota

1. TLS Protocol: Secure protocol with client puzzles

Raluca Catargiu, Monica Borda

2. Using kerberos to secure TLS protocol

Raluca Catargiu, Monica Borda

3. Analysis and Simulation of a Predictable Routing Protocol for VANETs

Roxana Zoican, Dan Galatchi

4. Implementation of QoS-aware Virtual Routers

Andrei Bogdan Rus, Melinda Barabas, Georgeta Boanea, Virgil Dobrota

5. Direction – of – Arrival Estimation for Uniform Sensor Arrays

Andy Vesa, Arpad Iozsa

6. Multimodal access control systems

Marius Daniel David, Monica Borda

7. Person authentication technique using human iris recognition

Marius Daniel David, Monica Borda

8. Mobile banking: deploying and consuming web services

Catalin M. Popa, Victor Croitoru, Eugen Pop

9. Secure and Flexible Model for Firewall Policy Management

Daniel Gheorghica, Victor Croitoru

10. Optimized real-time and load balanced routing in dynamic networks by using genetic algorithm

Majed ValadBeigi, Hamid Nabizadeh Alamdari, Maghsoud Abaspour

Room A108 12³⁰ – 15⁴⁵ POWER ELECTRONICS & ROBOTICS

Chairmen:

Prof. Dr. Eng. Axel Graeser

Prof. Dr. Eng. Viorel Popescu

1. Ambient Intelligence and Rehabilitation Robots

Axel Graeser

2. Control of single phase inverters for wind energy conversion using PWM techniques

Florin Prutianu, Viorel Popescu

3. Digital Control for Switched Mode DC-DC Buck Converters

Nistor Daniel Trip, Sanda Dale, Viorel Popescu

4. Wireless Power Supply Using PIC18F448

Petru Papazian, Mircea Babaita, Aurel Gontean

5. Effects of Increasing Switching Frequency in Frequency Modulated Power Converters

Janis Jankovskis, Deniss Stepins, Dmitrijs Pikulins

6. Hardware implementation of a PIC18F448 based TIM for IEEE1451.2 compliant actuator control

Petru Papazian, Mircea Babaita

7. Euler-Bernoulli Equation Forever but Now in a New Form

Mirjana Filipovic

8. An autonomous robotic system

Dan-Marius Dobrea, Monica-Claudia Dobrea

Room A116 12³⁰ – 15⁴⁵ INSTRUMENTATION AND MEASUREMENT & MICROWAVES

Chairmen:

Prof. Dr. Eng. Dan Stoiciu

Prof. Dr. Eng. Aldo DeSABATA

1. Highway Road Traffic Information and Monitoring System

Mihai Cadariu, Monica Sabina Crainic

2. Numerical Exploration of Filtering Properties of some Shielded High Impedance Surfaces

Aldo De Sabata, Ladislau Matekovits

3. Electrical Power Network Disturbance Detection and Monitoring System

Dughir Ciprian

4. A Study of the External Factors that Affect the Measurement Data of a MEMS Gyroscope Sensor – Towards an Inertial Navigation System

Lucian Ioan Iozan, Corneliu Rusu, Jussi Collin, Jarmo Takala

5. On oscillation based filter testing

Nicolae Cojan, Arcadie Cracan, Liviu Goras

6. Metamaterial leaky-wave and resonant type antennas

Alexandru Bogdan Ochetan, George Lojewski

7. An Analog Predistorter for Nonlinear High-Power Amplifiers

X.L. Sun, S.W. Cheung, T.I. Yuk

8. A Circular-shaped Time-delay Line Inspired by CRLH TL Unit Cell for UWB Operation

J. Zhang S.W. Cheung, T.I. Yuk

9. Design of Power Efficient Power Amplifier for B3G Base Stations

Abubakar Sadiq Hussaini;

Room A105 16⁰⁰ – 18⁰⁰ EDUCATION

Chairmen:

Prof. Dr. Eng. Tiponut Virgil

1. Taking Steps in Understanding Multipath Propagation in Fluid Filled Pipelines

Marllene Daneti

2. Semantic MediaWiki Interoperability Framework from Semantic Social Software Perspective

Cornelia-Flavia Veja, Gregor Hagedorn, Gisela Weber, Mircea Giurgiu

3. **A SPICE Method for Designing Digital Filters from Analog Filters**
Corneliu Rusu, Lacrimioara Grama, Jarmo Takala
4. **Testing the viability of Podcasting in a particular eLearning system**
Iasmina Ermalai, Mihai Onita, Radu Vasii
5. **Designing a Semantic Web Ontology for E-learning in Higher Education**
Marian Bucos, Bogdan Dragulescu, Marius Veltan

Room A106 16⁰⁰ – 19³⁰ COMMUNICATIONS 2

Chairmen:

Prof. Dr. Eng. Tudor Palade
Prof. Dr. Eng. Georgeta Budura

1. **A Software Demonstrator for IEEE 802.21 Media Independent Handover in Heterogeneous Networks**
Valentin Andrei, Eduard C. Popovici, Octavian Fratu, Simona Halunga
2. **Conventional and optimum multiuser detectors performances for image transmission**
Carmen Voicu, Simona Halunga, Dragos Vizireanu, Octavian Fratu
3. **Implementation of a Security Layer for the SSL/TLS Protocol**
Mihai ORDEAN, Mircea GIURGIU
4. **Radio coverage and performance analysis for local area networks**
Cristian Androne, Tudor Palade
5. **Comparing the Performance of Duo-Binary Turbo Codes on Rice Flat Fading Channel**
Maria Kovaci, Horia Balta
6. **Estimators of the indoor channel for GPS-based pseudolite signal**
Alexandru Rusu- Casandra, Elena Simona Lohan, Ion Marghescu
7. **Towards Improving Positioning With the Use of GPS and EGNOS**
Andrei Marinescu, Dragos Catalin
8. **A Study of Mobility Management using IEEE 802.21**
Alexandru Vulpe, Serban -Georgica Obreja, Octavian Fratu

9. Design of an modified RFB protocol and implementation in an ultra thin client

Daniel Zinca

10. Analyze of Sensor Networks for Poachers' and Wildlife Monitoring

Alina-Mihaela Bădescu, Octavian Fratu, Simona Halunga, Alexandru Frugină, Ioana Marcu

11. MMSE Synchronous Systems Behaviour in Different Types/Length of Spreading Sequences Environment

Cristinel Vasile, Simona V. Halunga, Ioana M. Marcu, Octavian Fratu, Alina Badescu

Room A108 16⁰⁰ – 19³⁰ SIGNAL PROCESSING

Chairmen:

Prof. Dr. Eng. Alexandru Isar

Prof. Dr. Eng. Lucian Stanciu

1. A Frequency Domain Method for Speech Separation in a Reverberant Room

Septimiu Mischie, Georgiana Simion

2. ECG Statistical Denoising in the Wavelet Domain

Beatrice Arvinti, Marius Costache, Marius Oltean, Dumitru Toader, Alexandru Isar

3. A Second Order Statistical Analysis of the Hyperanalytic Wavelet Transform

Corina Nafornta, Ioana Firoiu, Dorina Isar, Jean-Marc Boucher, Alexandru Isar

4. Speech De-noising System with Non Local Means Algorithm

Sorin Zoican

5. Apodizing filters for digital audio equalizers

Lucian Stanciu, Cristian Stanciu

6. An optimal full-genetic technique used to train RBF neural networks

Iulian-Constantin Vizitiu, Nicolaescu Ioan, Stoica Adrian, Ciotirnae Petrica, Radu Adrian

7. Adaptive algorithms for double-talk echo cancelling

Ioana Homana, Marina Topa, Botond Sandor Kirei, Cristian Contan

8. Symmetric Adaptive Decorrelation for I/Q Imbalance Compensation in Narrowband Receivers

Kirei Botond Sandor, Marius Neag, Marina Dana Topa

9. Estimation of the Noise Power in the NPVSS-NLMS Algorithm

Radu Mihnea Udrea, Constantin Paleologu, Jacob Benesty, Silviu Ciochina

10. Parallel Model for Spiking Neural Networks using Matlab

Radu Mirsu, Virgil Tiponut

Room A116 16⁰⁰ – 19³⁰ ELECTRONIC CIRCUITS

Chairmen:

Prof. Dr. Eng. Dorina Isar

Conf. Dr. Eng. Daniel Belega

1. Improved Linearity CMOS Differential Amplifiers with Applications in VLSI Designs

Cosmin Popa

2. Enhanced Dual-Path Compensated Amplifier for Driving Large Capacitive Load

Razvan-Gabriel Vieru, Romeo Ghinea, Liviu Goras

3. An improved precision full-wave rectifier for low-level signal

Slobodan Djukic, Milan Veskovic, Ana Vulovic

4. Optimization of the Channel Filter in OFDM Radio Receivers by Using Genetic Algorithms

Ioana Sărăcut, Victor Popescu, Marius Neag, Raul Onet, Stephen McDonagh

5. A Time Multiplexed Programmable Array for Structured ASIC Technology

Traian Tulbure

6. Performance Gain from Data and Control Dependency Elimination in Embedded Processors

Valeriu Codreanu, Radu Hobincu

7. Variable gain amplifier building blocks based on MOSFET current dependence on the drain to source voltage

Arcadie Cracan, Nicolae Cojan;

8. First Generation Current Conveyor Macromodel

Beniamin Dragoi

Friday, November 12th

Room A105 09⁰⁰ – 11⁰⁰ ELECTRONIC PACKAGING

Chairmen:

Prof. Dr. Eng. Paul Svasta

Prof. Dr. Eng. Aurel Gontean

1. PCBs with Different Core Materials Assembling in Vapor Phase Soldering Technology

Ioan Plotog, Traian Cucu, Bogdan Mihailescu, Gaudentiu Varzaru, Paul Svasta

2. Vapor Phase Soldering Technology Applications for PCB with Different Final Finishes

Ioan Plotog, Traian Cucu, Bogdan Mihailescu, Gaudentiu Varzaru, Paul Svasta

3. Multicriterial approach correlation of the solder joints functional tests results

Ioan Plotog, Traian Cucu, Bogdan Mihailescu, Gaudentiu Varzaru, Paul Svasta

4. VPS Control Module EMC Modeling and Evaluation

Bogdan Mihailescu, Ioan Plotog, Paul Svasta, Marian Vladescu

5. Solder Joints Mechanical Functionality Tested by Shear Forces Methodology

Ioan Plotog, Traian Cucu, Gaudentiu Varzaru, Bogdan Mihailescu, Iulian Busu

6. Electroluminescent lamps driver on compatible flexible substrates

Ciprian Ionescu, Iulian Busu, Andreea Bonea, Norocel Codreanu, Paul Svasta

Room A116 09⁰⁰ – 13⁰⁰ IMAGE PROCESSING

Chairmen:

Prof. Dr. Eng. Vasile GUI

Prof. Dr. Eng. Romulus Terebes

1. Coherence enhancing image sharpening and denoising using a novel shock filter model

Cosmin Ludusan, Olivier Laviaille, Romulus Terebes, Monica Borda

2. Advanced techniques in image processing - High dynamic range acquisition and shape recognition

Sorin Ivascu, Corneliu Toma, Axel Gräser

3. Using PEG-LDPC Codes for object identification

Wolfgang Pross, Franz Quint, Marius Ottesteanu

4. Studying the Effectiveness of Using Linear Subspace Techniques to Improve SVM Classifiers in Facial Image Classification

Nikolaos Tsapanos, Nikolaos Nikolaidis, Ioannis Pitas

5. Target Detection Algorithm Validation for WSN

Ruxandra-Ioana Rusnac, Aurel Stefan Gontean

6. Some Experimental Results on Digital Interpolation for Body Surface Potential Maps

Calin Simu, Eugen Marza

11⁰⁰ - 11¹⁵ Coffee Break

7. Romanian language statistics and resources for text-to-speech systems

Adriana Stan, Mircea Giurgiu

8. Fast textural analysis method for aluminum detection in calcium aluminoferrite

Muguras Mocofan, Mariana Suba

9. An Efficient Hardware Implementation of H.264 TQ/IQT Module

H. Loukil, A. Ben Atitallah, P. Kadionik, N. Masmoudi

10. A parallel hardware architecture of deblocking filter in H264/AVC

Moez Kthiri, Hassen Loukil, Ahmed Ben Atiltallah, Patrice Kadionik, Nouri Masmoudi

Room A106 09⁰⁰ – 13⁰⁰ COMMUNICATIONS 2

Chairmen:

Prof. Dr. Eng. Mircea F. Vaida

Prof. Dr. Eng. Franz Quint

1. A Secured Distributed Medical Application Endowed with Image Processing Facilities

Cosmin Strilechi, Ligia D. Chiorean, Mircea F. Vaida

2. An Improved Opportunistic Packet Transmission Scheme for Wireless Sensor Networks

Hakki Soy, Ozgur Ozdemir, Mehmet Bayrak

3. One methodological approach to the development of dynamic adaptation structures in network simulators

Enio Kaljić, Mesud Hadžialić, Tarik Čaršimamović

4. Matlab Modeling and Analysis of the Signal Path in Zero-IF DVB-H Radio Receivers

Raul ONET, Victor POPESCU, Marius NEAG, Ioana SARACUT, Marina TOPA

5. Multipath Interference Reduction Using Deconvolution in OCDMA Wireless Optical System

Radu Lucaciu

6. Simulation and analysis of a Wi-Fi public network using the Radio Mobile software

Bogdan Trandafir, Octavian Fratu, Simona Halunga

11⁰⁰ - 11¹⁵ Coffee Break

7. Parallel Turbo-TCM Schemes using Recursive Convolutional GF(2^N) Encoders over Frequency Non-Selective Fading Channel

Calin Vladeanu, Adrian Florin Paun, Radu Lucaciu, Safwan El Assad

8. Performance evaluation of MRC systems in the presence of Nakagami-m fading and shadowing

Petar Nikolić, Dragana Krstić, Mihajlo Stefanović, Stefan Panić, Fatih Destović

9. Performance of SIR-based Triple Selection Combining over Correlated Weibull Channel

Zoran Popovic, Dragana Krstic, Nikola Sekulovic, Mihajlo Stefanovic

10. DNA Repeats Detection Using Numerical Representations and Dot Plot Analysis

Petre G. Pop, Alin Voina

11. The ESPRIT algorithm. Variants and precision

Arpad Iozsa, Andy Vesa

12. Long-Range Dependence in WiMAX traffic. A Preliminary Analysis

Cristina Stolojescu

13. Vertical distribution of the RF signal inside a building, illuminated by a 3G mobile network base-station

Adrian Mihaiuti, Alimpie Ignea

14. An alternative strategy for grouping students in eLearning using an Enneagram methodology and eye tracking

Florin-Claudiu Pop, Mircea-Florin Vaida, Marcel Cremene



