

# ELMAR-2013 PROGRAM

**Wednesday, 25 September 2013**

09:00 - 09:30 <b>Registration</b>		
<b>HALL A</b>		
09:30 - 10:00 <b>OPENING SESSION: Welcome Speeches</b>		
10:00 - 10:30 <b>WELCOME COCKTAIL</b>		
10:30 - 11:30 <b>PLENARY SESSION: Keynote Talks</b>		
<b>HALL A</b>	<b>HALL B</b>	<b>HALL C</b>
11:30 - 12:30 <b>SESSION:</b> <b>Image and Video Processing 1</b>	11:30 - 12:30 <b>SESSION:</b> <b>Telecommunications</b>	11:30 - 12:30 <b>SPECIAL SESSION:</b> <b>Radio Navigation</b>
12:30 - 14:00 <b>Lunch Break</b>		
14:00 - 16:00 <b>SESSION:</b> <b>Image and Video Processing 2</b>	14:00 - 17:00 <b>SESSION:</b> <b>Student Session</b>	14:00 - 16:00 <b>SPECIAL SESSION:</b> <b>Precise Carrier Phase Positioning</b>
17:00 - 21:00 <b>GUIDED ZADAR SIGHTSEEING AND CONCERT AT ST. DONAT'S CHURCH</b> <u>Meeting Point:</u> Hotel "Funimation", Main Entrance, 17:00		
21:00 <b>ELMAR-2013 SYMPOSIUM DINNER</b> <b>(with cocktail)</b> <u>Meeting Point:</u> Hotel "Funimation", bar at the pool, 21:00		

# ELMAR-2013 PROGRAM

## Thursday, 26 September 2013

09:00 - 09:30 <b>Registration</b>		
HALL A	HALL B	HALL C
09:30 - 11:00 <b>SESSION:</b> Image and Video Processing 3	09:30 - 11:00 <b>SESSION:</b> Power Electronics and Automation & Antennas and Propagation	09:30 - 11:00 <b>SPECIAL SESSION:</b> From 3G to 4G and Beyond
11:00 - 11:15 <b>Coffee Break</b>		
11:15 - 12:30 <b>SESSION:</b> Image and Video Processing 4	11:15 - 12:30 <b>SESSION:</b> e-Learning and m-Learning	11:15 - 12:30 <b>SPECIAL SESSION:</b> Spectrum Engineering
12:30 - 14:00 <b>Lunch Break</b>		
14:15 - 19:30 <b>EXCURSION TO THE NATIONAL PARK KRKA</b> <u>Meeting Point:</u> Hotel "Funimation", Main Entrance, 14:15		

## Friday, 27 September 2013

HALL A	HALL B
09:00 - 10:30 <b>SESSION:</b> Wireless Communications & Sea and Port Ecology	09:00 - 10:30 <b>SPECIAL SESSION:</b> Mobile Multimedia Services and Applications
10:30 - 11:00 <b>Coffee Break</b>	
11:00 - 12:45 <b>SESSION:</b> Speech and Audio Processing	11:00 - 12:00 <b>SESSION:</b> Multimedia Communications

## Wednesday, 25 September 2013

09:00 - 09:30      **Registration**

### **HALL A**

**Wednesday, 25 September 2013**

09:30 - 10:00      **OPENING SESSION: Welcome Speeches**

Session Chair:      **Branka Zovko-Cihlar, Viljem Jerič, Mario Muštra**

10:00 - 10:30      **WELCOME COCKTAIL**

10:30 - 11:30      **PLENARY SESSION: Keynote Talks**

Session Chair:      **Branka Zovko-Cihlar**

**Darko Ratkaj, Senior Project Manager, Technology & Innovation, European Broadcasting Union; SWITZERLAND**

Multimedia Broadcasting - Promises and Pitfalls of Internet Distribution

**Prof. Pavol Podhradský, Telecommunications Department, Faculty of Electrical Engineering and Information Technology, Slovak University of Technology in Bratislava; SLOVAKIA**

Evolution trends in Hybrid Broadcast Broadband TV

11:30 - 12:30      **SESSION: Image and Video Processing 1**

Session Chair:      **Mario Muštra**

**Paolo Sernani, Andrea Claudi, Gianluca Dolcini, Luca Palazzo, Gianluigi Biancucci, Aldo Franco Dragoni; ITALY**

Subject-dependent Degrees of Reliability to Solve a Face Recognition Problem Using Multiple Neural Networks

**Jozef Ban, Matej Féder, Vojtěch Jirka, Marek Loderer, Luboš Omelina, Miloš Oravec, Jarmila Pavlovičová; SLOVAKIA**

An Automatic Training Process Using Clustering Algorithms for Face Recognition System

**Eva Cetinic, Sonja Grgic; CROATIA**

Automated Painter Recognition Based on Image Feature Extraction

**Cihan Sarı, Ceyhun Burak Akgül, Bülent Sankur; TURKEY**

Combination of Gross Shape Features, Fourier Descriptors and Multiscale Distance Matrix for Leaf Recognition

12:30 - 14:00      **Lunch Break**

14:00 - 16:00      **SESSION: Image and Video Processing 2**

Session Chair:      **Dijana Tralić and Mario Muštra**

**Mehran Iranpour; IRAN**

Adaptive Edge Tracing Steganography

**Gabriel Bugár, Vladimír Bánoci, Martin Broda, Dušan Levický, Ervin Mikó; SLOVAKIA**

Blind Steganography based on 2D Haar Transform

**Vladimír Bánoci, Gabriel Bugár, Martin Broda, Dušan Levický; SLOVAKIA**

Multi-classification Model for Image Steganalysis

**Irena Orović, Srdjan Stanković; MONTENEGRO**

Combined Compressive Sampling and Image Watermarking

**Irena Orović, Nikola Žarić, Srdjan Stanković; MONTENEGRO**

An Analysis of Quantization Influence on Optimal Detection of Multiplicative Watermark

**Dijana Tralic, Ivan Zupancic, Sonja Grgic, Mislav Grgic; CROATIA**

CoMoFoD - New Database for Copy-Move Forgery Detection

**Mario Muštra, Mislav Grgic; CROATIA**

Dense Tissue Segmentation in Digitized Mammograms

17:00 - 21:00      **GUIDED ZADAR SIGHTSEEING AND CONCERT AT ST. DONAT'S CHURCH**

Meeting Point: Hotel "Funimation", Main Entrance, 17:00

21:00                **ELMAR-2013 SYMPOSIUM DINNER (with cocktail)**

Meeting Point: Hotel "Funimation", bar at the pool, 21:00

11:30 - 12:30      **SESSION: Telecommunications**

Session Chair:      **Narcis Behlilović**

**Alen Begović, Namir Škaljo, Narcis Behlilović; BOSNIA AND HERZEGOVINA**  
Delivering of Triple-Play Services through Fully-Loaded Copper Cable

**Namir Škaljo, Alen Begović, Mesud Hadžialić; BOSNIA AND HERZEGOVINA**  
An Impact of Resistive Impairments in In-House Cabling System on IPTV QoS

**Mesud Hadzialic, Branko Dosenovic, Merim Dzaferagic, Jasmin Musovic; BOSNIA AND HERZEGOVINA**

Cloud-RAN: Innovative Radio Access Network Architecture

**Oskars Ozolins, Vjaceslavs Bobrovs, Girts Ivanovs; LATVIA**

Conversion of 40 Gbit/s RZ-OOK to NRZ-OOK with a Single Uniform Fibre Bragg Grating

12:30 - 14:00      **Lunch Break**

14:00 - 17:00      **SESSION: Student Session**

Session Chair:      **Iva Bojić**

**Wilfried Woeber, Daniel Szuegy, Wilfried Kubinger, Lars Mehnen; AUSTRIA**  
A Principal Component Analysis Based Object Detection for Thermal Infra-Red Images

**Sina Mohseni, Hussain Montazeri Kordy, Ramin Ahmadi; IRAN**  
Facial Expression Recognition using DCT Features and Neural Network Based Decision Tree

**Rui Costa; PORTUGAL**

VADM - A Common API for Agnostic Application Development within VANETs

**Ahmet Can Koral, Güray Gürkan, Oruç Bilgiç; UNITED KINGDOM / TURKEY**

Low Cost Maximum Power Point Tracking Method for Solar Battery Charging

**Neven Drljević, Tara Oroz, Sebastijan Wieser, Ivica Botički; CROATIA**

The Challenges of Transforming Teaching and Assessment of Programming

**Antun Tonko Jakobović, Michaël Chiem, Francesc González Solé, Mateja Hajdinjak; CROATIA / FRANCE / SPAIN**

DNA Extraction from Three Bone Samples of Different Age and Origin

**Dorotea Šušak, Hana Ahmetović, Vladimir Cvjetojević, Nina Lopič; CROATIA / SLOVENIA**

When Physics Meets Biology in the Field of Liquids

**Iris Grgurina, Amade Nemes, Ena Orešković, Marija Klasić; CROATIA / HUNGARY**

Genetically Modified Organisms - How to Test Their Presence in Nature?

**Mate Windisch, Jerko Meštrović, Barbara Rubinić, Edi Topić; HUNGARY / CROATIA**

Polymers: Art, Science and Technique

**Jaksa Milivojevic, Luka Mijalkovic, Matea Grguric, Jelena Spanicek; SERBIA / CROATIA**

Geology of the Miocene Deposits on Gornji Vrhovci Locality, Croatia

**Monika Majstorović, Éva Bernadett Benyei, Lucija Klarić; CROATIA / HUNGARY**

Data Mining for Potential Diabetes Biomarker

**Marko Cvijović, Mislav Unger, Jan Corazza; SERBIA / CROATIA**

The Art of Playing Games

**Karla Carević, Réka Karkas, Petra Bucić, Ruben R. Ramalho; CROATIA / HUNGARY / PORTUGAL**

Bottom Up: Synthesis and Applications of Nanoparticles

**Simon Cossart, Filip Keri, Luka Kovač, Ivan Sović; FRANCE / CROATIA**

C3PU: A 16-bit Soft-Core Processor

**Boris Majić, Laviru Koruwakankanamge, Renata Puhač, Renan Gross; SERBIA / FRANCE / CROATIA / ISRAEL**

Experimental Observation of Chaotic Properties of the Double Pendulum

**Anja Skevin, Ivan Kožar, Ivana Kovačić, Nemanja Janković; CROATIA / SERBIA**

Touch Screens Are History

**Petruša Stjepan, Balabanovska Matea, Ćusek Luka, Gajski Domagoj, Nászai Anna, Nikolić Jelena; CROATIA / MACEDONIA / HUNGARY / SERBIA**

How to Kill Superconductivity?

17:00 - 21:00 **GUIDED ZADAR SIGHTSEEING AND CONCERT AT ST. DONAT'S CHURCH**

Meeting Point: Hotel "Funimation", Main Entrance, 17:00

21:00 **ELMAR-2013 SYMPOSIUM DINNER (with cocktail)**

Meeting Point: Hotel "Funimation", bar at the pool, 21:00

11:30 - 12:30      **SPECIAL SESSION: Radio Navigation**

Session Chair:      **Tomislav Kos**

**Renato Filjar, Darko Huljentić, Kristijan Lenac; CROATIA**

Enhancing Performance of GNSS Position Estimation by Cloud-based GNSS SDR Receiver Architecture Utilisation

**Hal J. Strangeways, Rajesh Tiwari; UNITED KINGDOM**

Prediction and Mitigation of Ionospheric Scintillation and Tracking Jitter for GNSS Positioning

**Roman Galas, Tilo Schöne, Marija Cokrljic, Maximilian Semmling; GERMANY**

On Precise GNSS-based Sea Surface Monitoring Systems

**Josip Vuković, Pavel Najman, Tomislav Kos, Sandro M. Radicella; CROATIA / ITALY**

Vertical Total Electron Content Performance of EGNOS and Locally Adapted NeQuick 2 Model

**Pavel Najman, Josip Vuković, Tomislav Kos, Norbert Jakowski; CROATIA / GERMANY**

Ionosphere Modeled with the NeQuick 2 Driven by Various Space Weather Indices

12:30 - 14:00      **Lunch Break**

14:00 - 16:00      **SPECIAL SESSION: Precise Carrier Phase Positioning**

Session Chair:      **Patrick Henkel**

**Gabriele Giorgi; GERMANY**

Single-baseline GNSS Attitude Determination: the Problem of Degenerate Solutions

**J. Sebastian Knogl, Patrick Henkel, Christoph Günther; GERMANY**

Attitude Estimation Based on Multibeam Antenna Signal Power Levels

**Zhibo Wen, Patrick Henkel, Christoph Günther; GERMANY**

Precise Point Positioning with Estimation of Code Multipath Subset

**Chen Zhu, Siwei Zhang , Armin Dammann, Stephan Sand, Patrick Henkel, Christoph Günther; GERMANY**

Return-to-Base Navigation of Robotic Swarms in Mars Exploration Using DoA Estimation

**Patrick Henkel, Jane Jean Kiam; GERMANY**

Maximum A Posteriori Probability Estimation of Integer Ambiguities and Baseline

17:00 - 21:00      **GUIDED ZADAR SIGHTSEEING AND CONCERT AT ST. DONAT'S CHURCH**

Meeting Point: Hotel "Funimation", Main Entrance, 17:00

21:00      **ELMAR-2013 SYMPOSIUM DINNER (with cocktail)**

Meeting Point: Hotel "Funimation", bar at the pool, 21:00

## Thursday, 26 September 2013

**HALL A**

**Thursday, 26 September 2013**

09:30 - 11:00      **SESSION: Image and Video Processing 3**

Session Chair:      **Emil Dumić**

**Časlav Livada, Irena Galić, Branka Zovko-Cihlar; CROATIA**  
EEDC Image Compression Enhancement by Symbol Prediction

**Emil Dumić, Sonja Grgić; CROATIA**  
Reduced Video Quality Measure Based on 3D Steerable Wavelet Transform and Modified Structural Similarity Index

**Carl J. Debono, Keith Izzo; MALTA**  
Efficient Implementation of the Integer Lifting Transform for Video Compression on FPGA

**Akbar Sheikh Akbari, Pooneh Bagheri Zadeh; UNITED KINGDOM**  
Disparity Compensated View Filtering Wavelet and Compressive Sampling based Multi-View Image Codec

**S. Amir Hossein A. E. Tabatabaei, Obaid Ur-Rehman, Natasa Zivic; GERMANY**  
A DWT-based Image Authentication and Correction Mechanism

11:00 - 11:15      **Coffee Break**

11:15 - 12:30      **SESSION: Image and Video Processing 4**

Session Chair:      **Emil Dumić**

**Srećko Kunić, Zoran Šego; CROATIA**  
Beyond HDTV Technology

**Matija Maleš, Adam Heđi, Mislav Grgić; CROATIA**  
Aesthetic Quality Assessment of Headshots

**Javier Silvestre-Blanes, Rubén Pérez-Lloréns; SPAIN**  
Video Motion Determination

**Hany Said, Akbar Sheikh Akbari; UNITED KINGDOM**  
H.264/AVC Based Multi-view Video Codec using the Statistics of Block Matching

**Abdulkadir Iyyaka Audu, Abdul Hamid Sadka; UNITED KINGDOM**  
Generation of Three-Dimensional Content from Stereo-Panoramic View

12:30 - 14:00      **Lunch Break**

14:15 - 19:30      **EXCURSION TO THE NATIONAL PARK KRKA**  
Meeting Point: Hotel "Funimation", Main Entrance, 14:15



09:30 - 11:00

**SESSION:  
Power Electronics and Automation & Antennas and Propagation**Session Chairs: **Mario Muštra****Ashraf Emleh, Arnold de Beer, Hendrik Ferreira, Adrianus Han Vinck;  
SOUTH AFRICA / GERMANY**

Effects of Plasma Lamps on the Power-line Communications Channel

**Angela Digulescu, Ion Candel, Jawad Dahmani, Daniela Deacu, Cornel Ioana,  
Vasile Gabriel; ROMANIA / FRANCE**

Electric Arc Locator in Photovoltaic Power Systems Using Advanced Signal Processing Techniques

**Andrei Danchiv; ROMANIA**

Current Sensing Accuracy Analysis for Detection and Limitation Purposes in Power Switches

**Dmitry Baimel, Saad Tapuchi; ISRAEL**

A New Topology of Cascaded Multilevel Inverter

**Ashraf Emleh, Arnold de Beer, Hendrik Ferreira, Adrianus Han Vinck;  
SOUTH AFRICA / GERMANY**

Interference Detection on Powerline Communications Channel When In-Building Wiring System Acts as an Antenna

11:00 - 11:15

**Coffee Break**

11:15 - 12:30

**SESSION: e-Learning and m-Learning**Session Chair: **Pavol Podhradsky****Krešimir Kavran, Nikola Majstorović, Tvrtko Matošević; CROATIA**

Combining Open Source Technologies for Educational Purposes

**Tomáš Zeman, Jaromír Hrad, Pavol Podhradský; CZECH REPUBLIC / SLOVAKIA**

Increasing the Level of Vocational Education in European Scope

**Juraj Petrovic, Dijana Tralic, Predrag Pale; CROATIA**

An Automatized Case-based Cognitive Skills Assessment Approach

**Tomislav Novak, Sonja Zentner Pilinsky, Milan Draganić; CROATIA**

Performance of Dynamic Bandwidth Allocation Algorithms in Passive Optical Networks

12:30 - 14:00

**Lunch Break**

14:15 - 19:30

**EXCURSION TO THE NATIONAL PARK KRKA**Meeting Point: Hotel "Funimation", Main Entrance, 14:15

09:30 - 11:00 **SPECIAL SESSION: From 3G to 4G and Beyond**

Session Chair: **Sonja Zentner Pilinsky and Alberto Teković**

**Lara Borenovic, Mirko Simic; SERBIA**

Test Measurements Considerations for LTE as Future Public Safety Communication Technology

**Ana Katalinić Mucalo; CROATIA**

Prospects of Multiuser MIMO in 4G and Beyond

**Alberto Teković, Ivan Pešut, Zlatan Morić; CROATIA**

Voice service in an LTE network- CSFB

**Alberto Teković, Robert Nađ; CROATIA**

LTE Performance at the Cell Edge and ICIC

**Winton Afrić, Sonja Zentner Pilinsky; CROATIA**

Multipath Fading and LTE Downlink Cell Size Calculation

**Angelo Gary Markoč, Gordan Šišul; CROATIA**

Quality of Service in Mobile Networks

11:00 - 11:15 **Coffee Break**

11:15 - 12:30 **SPECIAL SESSION: Spectrum Engineering**

Session Chair: **Miran Gosta, Ana Katalinić Mucalo and Krešimir Šakić**

**Jasmin Mušović, Mesud Hadžialić, Kemal Huseinović; BOSNIA AND HERZEGOVINA**

Dynamic Spectrum Access: An Overview and Synchronization Issue

**Evaldas Stankevicius, Arturas Medeisis; LITHUANIA**

LTE 800 MHz vs. Short Range Devices: Adjacent Band Compatibility around Band Edge of 863 MHz

**Kresimir Sakic, Gordan Šimac; CROATIA**

Implementation of the LTE System and Interference Evaluation to the DVB-T System in Croatia

**Krunoslav Bejuk, Ana Katalinić Mucalo; CROATIA**

Benefits and Drawbacks of Asymmetric Microwave Links

**Vladimir Duković, Ana Katalinić Mucalo; CROATIA**

Principles and Prospects of cross-border coordination for fixed and mobile services

12:30 - 14:00 **Lunch Break**

14:15 - 19:30 **EXCURSION TO THE NATIONAL PARK KRKA**

Meeting Point: Hotel "Funimation", Main Entrance, 14:15

## Friday, 27 September 2013

**HALL A**

**Friday, 27 September 2013**

09:00 - 10:30

**SESSION: Wireless Communications & Sea and Port Ecology**

Session Chair: **Borivoj Modlic**

**Begüm Korunur Engiz, Çetin Kurnaz, Hatice Sezgin; TURKEY**

Determining the Optimum Pilot Density in OFDM Systems over Propagation Measurement Based Channels

**Adriana Lipovac, Anamaria Bjelopera; CROATIA**

LTE in Classroom: Turning Math into Live Signal Simulation and Analysis

**Nicoletta Saulig, Željka Milanović, Irena Orović, Srdjan Stanković, Victor Sucic; CROATIA / MONTENEGRO**

Entropy Based Extraction and Classification of Frequency Hopping Signals from their TFDs

**Pavel Sigeti, Miloš Oravec, Jarmila Pavlovičová; SLOVAKIA**

Some Aspects of QoS in Wireless Networks

**Irena Jurdana, Renato Ivče; CROATIA**

Coastal Protection of Submarine Optical Cables: Croatian Experiences

**Darko Glažar, Kristina Grubišić; CROATIA**

The Role of the Harbour Master's Office in Aspect of Maritime Safety

10:30 - 11:00

**Coffee Break**

11:00 - 13:00

**SESSION: Speech and Audio Processing**

Session Chair: **Gregor Rozinaj**

**Tomasz Maka, Piotr Dziurzanski; POLAND**

Parallel Audio Features Extraction for Sound Indexing and Retrieval Systems

**Juraj Kacur, Mario Varga, Gregor Rozinaj; SLOVAKIA**

Speaker Identification in a Multimodal Interface

**Ivan Drozd, Ján Tóth, Gregor Rozinaj; SLOVAKIA**

Text Categorization Implementation into the Modular Speech Synthesizer

**Martin Lojka, Matus Pleva, Jozef Juhar, Eva Kiktova; SLOVAKIA**

Modification of Widely Used Feature Vectors for Real-time Acoustic Events Detection

**Maha Charfeddine, Eya Mezghani, Chokri Ben Amar; TUNISIA**

Modified video watermarking scheme using audio silence deletion

**Alaa Rahimi, Seyed Ghorshi, Ali Sarafnia; IRAN**

The Employment of Bayesian Method in Noise Reduction and Packet Loss Replacement

**Mabu Johannes Manaileng, Madimetja Jonas Manamela; SOUTH AFRICA**

Connected-digits Recognition for an Under-resourced Language Using Hidden Markov Models

09:00 - 10:30

**SPECIAL SESSION: Mobile Multimedia Services and Applications**Session Chair: **Snježana Rimac-Drlje and Mario Vranješ****Aaron Blojay Grant, Opeoluwa Tosin Eluwole; UNITED KINGDOM**

Cloud Resource Management – Virtual Machines Competing for Limited Resources

**Gergely Lukács, Mátyás Jani, György Takács; HUNGARY**

Acoustic Feature Mining for Mixed Speech and Music Playlist Generation

**Goran Horvat, Drago Zagar, Tomislav Matic; CROATIA**

Analysis of QoS Parameters for Multimedia Streaming in Wireless Sensor Networks

**Ognjen Nemcic; CROATIA**

Scalable Visual Communication Architecture Supporting Mobility

**Denis Vranješ, Mario Vranješ, Snježana Rimac-Drlje; CROATIA**

Spatial Upscaling of Scalable Coded Video for Mobile Applications

10:30 - 11:00

**Coffee Break**

11:00 - 12:30

**SESSION: Multimedia Communications**Session Chair: **Miloš Oravec****Alexandra Posoldová, Miloš Oravec, Gregor Rozinaj; SLOVAKIA**

Classification and Preprocessing of Data for Television Recommendation System

**Marek Vančo, Ivan Minárik, Gregor Rozinaj; SLOVAKIA**

Dynamic Gesture Recognition for Next Generation Home Multimedia

**Juraj Matejka, Ondrej Lábaj, Dušan Šupala, Tomáš Kokolevský, Pavol Podhradský; SLOVAKIA**

Security Aspects of Hybrid Broadband Broadcast Communication

**Iva Bacic, Emil Dumić, Kresimir Malaric; CROATIA**

Fixed Scenario Reception of DVB-T2 Signal in Urban Area

**Arianit Maraj, Adrian Shehu; ALBANIA**

Quality Analysis For Offering IPTV Services In Telecom Of Kosova-TK