

ELMAR-2019 PROGRAM

Monday, September 23	Tuesday, September 24	Wednesday, September 25
8:00 - 16:30 Registration	9:00 - 12:00 Registration	9:00 - 14:00 Registration
9:00 - 9:45 OPENING SESSION: Welcome Speeches	9:00 - 10:30 <u>SS2</u>: Computer Vision for New Emerging Applications <u>S1</u>: Wireless Communications	9:00 - 10:30 <u>S4</u>: Image and Video Processing 2 <u>S5</u>: Antennas and Propagation
9:45 - 10:30 Opening Cocktail		
10:30 - 12:30 PLENARY SESSION: Keynote Talks	10:30 - 11:00 Coffee Break	10:30 - 11:00 Coffee Break
12:30 - 14:00 Lunch Break	11:00 - 12:30 <u>S2</u>: Image and Video Processing 1 <u>S3</u>: Mobile Communications	11:00 - 12:30 <u>S6</u>: Robotics <u>S7</u>: Radar and Navigation Systems
14:00 - 16:30 Workshop on DVB-T2 <i>* In Croatian</i>		
14:00 - 16:30 <u>SS1</u>: Intelligent Transport Systems	13:00 - 20:00 Excursion by Ship* <i>*Lunch on board</i>	12:30 - 14:00 Lunch Break
17:15 - 20:00 GUIDED ZADAR SIGHTSEEING		14:00 - 15:30 <u>S8</u>: Smart Systems <u>S9</u>: Power Electronics and Automation
21:00 ELMAR-2019 SYMPOSIUM GALA DINNER		15:45 CLOSING SESSION

ELMAR-2019 PROGRAM

Monday, 23 September 2019

8:00 - 16:30 Registration	
HALL A	
9:00 - 9:45	OPENING SESSION: Welcome Speeches
9:45 - 10:30 OPENING COCKTAIL	
HALL A	
10:30 - 12:30	PLENARY SESSION: Keynote Talks
12:30 - 14:00 Lunch Break	
HALL A	HALL B
14:00 - 16:30 Workshop on DVB-T2 in Croatia "New Era of Digital Terrestrial Television in Croatia" Language: Croatian	14:00 - 16:30 SPECIAL SESSION 1: Intelligent Transport Systems
17:15 - 20:00 GUIDED ZADAR SIGHTSEEING <u>Meeting Point:</u> Hotel "Funimation", Main Entrance, 17:15	
21:00 ELMAR-2019 SYMPOSIUM GALA DINNER <u>Meeting Point:</u> Hotel "Donat", 21:00	

ELMAR-2019 PROGRAM

Tuesday, 24 September 2019

9:00 - 12:00 Registration	
HALL A	HALL B
9:00 - 10:30 SPECIAL SESSION 2: Computer Vision for New Emerging Applications	9:00 - 10:30 SESSION 2: Wireless Communications
10:30 - 11:00 Coffee Break	
11:00 - 12:30 SESSION 2: Image and Video Processing 1	11:00 - 12:30 SPECIAL SESSION 3: Mobile Communications
13:00 - 20:00 EXCURSION BY SHIP <u>Meeting Point:</u> Hotel "Funimation", Main Entrance, 12:45 <i>Lunch will be served on board the ship</i>	

ELMAR-2019 PROGRAM

Wednesday, 25 September 2019

9:00 - 14:00		Registration	
HALL A		HALL B	
9:00 - 10:30 SESSION 4: Image and Video Processing 2		9:00 - 10:30 SESSION 5: Antennas and Propagation	
10:30 - 11:00		Coffee Break	
11:00 - 12:30 SESSION 6: Robotics		11:00 - 12:30 SESSION 7: Radar and Navigation Systems	
12:30 - 14:00		Lunch Break	
14:00 - 15:30 SESSION 8: Smart Systems		14:00 - 15:30 SESSION 9: Power Electronics and Automation	
HALL B			
15:45		CLOSING SESSION	

Monday, 23 September 2019

8:30 - 16:30 **Registration**

HALL A

Monday, 23 September 2019

9:00 - 9:45 **OPENING SESSION: Welcome Speeches**

Session Chairs: **Branka Zovko-Cihlar, Mario Muštra**

9:45 - 10:30 **OPENING COCKTAIL**

10:30 - 12:30 **PLENARY SESSION: Keynote Talks**

Session Chair: **Branka Zovko-Cihlar**

Prof. Erich Leitgeb; Austria

Optical Wireless Communications and Hybrid Networks as Necessary Supplement and Important Extension of Future 5G Technology

Prof. Snježana Rimac-Drlje; CROATIA

Video Quality Evaluation in the Context of QoE Modelling for Adaptive Video Streaming

Miran Gosta, Mr. Sc., HAKOM; CROATIA

The biggest challenges facing 5G: security, health concerns and network construction challenges

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

14:00 - 16:30 **Workshop on DVB-T2 "New Era of Digital Terrestrial Television in Croatia"**

** Session will be held in Croatian language*

17:15 - 20:00 **GUIDED ZADAR SIGHTSEEING**

Meeting Point: Hotel "Funimation", Main Entrance, 17:15

21:00 **ELMAR-2019 SYMPOSIUM GALA DINNER**

Meeting Point: Hotel "Donat", 21:00

14:00 - 16:30 **SPECIAL SESSION 1: Intelligent Transport Systems**

Session Chairs: Mario Muštra, Sadko Mandžuka

Martin Gregurić, Sadko Mandžuka, Marko Šoštarić; CROATIA

The Application of Cooperative Variable Speed Limit Control for Reduction of Crash Potential

Viktor Valaštín, Kristián Košťál, Rastislav Bencel, Ivan Kotuliak; SLOVAKIA

Blockchain Based Car-Sharing Platform

Alan Vogel, Izidor Oremović, Robert Šimić, Edouard Ivanjko; CROATIA

Fuzzy Traffic Light Control Based on Phase Urgency

Krešimir Vidović, Sadko Mandžuka, Marko Šoštarić; CROATIA

Data Quality within National Access Point for Provision of Multimodal Travel Information within European Union

Dino Čakija, Lucas Assirati, Edouard Ivanjko, André Luiz Cunha; CROATIA/BRASIL

Autonomous Intersection Management: A Short Review

Darko Špoljar, Nelida Črnjarić-Žic, Kristijan Lenac, Valter Perinović; CROATIA

Characterisation of Multipath-Caused Commercial-Grade GPS Positioning Error in Intelligent Transport Systems (ITS)

Dominik Cvetek, Isabela Horenec, Mario Muštra, Niko Jelušić; CROATIA

Analysis of Correlation between Dwell Time Measured using Bluetooth Detector and Occupancy

17:15 - 20:00 **GUIDED ZADAR SIGHTSEEING**

Meeting Point: Hotel "Funimation", Main Entrance, 17:15

21:00

ELMAR-2019 SYMPOSIUM GALA DINNER

Meeting Point: Hotel "Donat", 21:00

Tuesday, 24 September 2019

9:00 - 12:00 **Registration**

HALL A

Tuesday, 24 September 2019

9:00 - 10:30 **SPECIAL SESSION 2: Computer Vision for New Emerging Applications**

Session Chairs: Irena Galić, Hrvoje Leventić

Krešimir Vdovjak, Hrvoje Leventić, Marija Habijan, Irena Galić; CROATIA
Adaptive Thresholding for Single Click Left Atrial Appendage Segmentation

Marija Habijan, Hrvoje Leventić, Irena Galić, Danilo Babin; CROATIA/BELGIUM
Estimation of the Left Ventricle Volume Using Semantic Segmentation

Denis Vajak, Mario Vranješ, Ratko Grbić, Denis Vranješ; CROATIA
Recent Advances in Vision-Based Lane Detection Solutions for Automotive Applications

Matteo Brisinello, Ratko Grbić, Mario Vranješ, Denis Vranješ; CROATIA
Review on text detection methods on scene images

10:30 - 11:00 **Coffee Break**

11:00 - 12:30

SESSION 2: Image and Video Processing 1

Session Chairs: Sonja Grgić, Snježana Rimac-Drlje

Nicoletta Saulig, Darko Etinger, Željka Milanović; CROATIA

Error Origin Analysis for Adaptive Time-Frequency Distribution Thresholding of Nonstationary Signals

Codruta O. Ancuti, Cosmin Ancuti, Mateu Sbert; SPAIN

Evaluation of Image Dehazing Techniques based on a Realistic Indoor Benchmark

Ante Poljicak, Davor Donevski, Petar Branislav Jelusic, Tamara Tomasegovic, Tomislav Cigula; CROATIA

Analysis of the GCR Communication Channel for Image Steganography

Davor Donevski, Ante Poljičak, Marija Prša, Tomislav Hudika; CROATIA

Adjustable Color Transformation Model

Jelena Vlaović, Snježana Rimac-Drlje, Filip Vranješ, Robert Pečkai-Kovač; CROATIA

Evaluation of adaptive bitrate selection algorithms for MPEG DASH

13:00 - 20:00

EXCURSION BY SHIP

Meeting Point: Hotel "Funimation", Main Entrance, 12:45

Lunch will be served on board the ship

9:00 - 10:30 **SESSION 1: Wireless Communications**

Session Chairs: Srećko Kunić, Pavol Podhradský

Miroslav Procházka, Rastislav Bencel, Kristián Košťál, Michal Ries; SLOVAKIA
Encryption and Decryption of Wireless Traffic in Software-Defined Wireless Networking

Krešimir Malarić, Damir Muha, Bosiljka Šaravanja, Tanja Pušić; CROATIA
Shielded Fabric Mini Anechoic Test Chamber

Nermin Goran, Alen Begović, Namir Škaljo; BOSNIA AND HERZEGOVINA
Unsupervised learning model for finding correlations between network and perceived QoS

Srećko Kunić, Zoran Šego; CROATIA
Analysis of the Hybrid Broadcast Broadband Television Standard - HbbTV

10:30 - 11:00 **Coffee Break**

11:00 - 12:30 **SESSION 3: Mobile Communications**

Session Chairs: Jelena Božek, Gregor Rozinaj

Eugen Šlapak, Juraj Gazda, Gabriel Bugár, Taras Maksymyuk; SLOVAKIA/UKRAINE
Review of cellular radio network cell placement design, from traditional to artificial intelligence based approaches

Alen Lustica, Jelena Bozek; CROATIA
5G Technology for Broadcast TV Applications

Emeka Obiodu, Nishanth Sastry, Aravindh Raman; UK
CLASP: a 999-style priority lanes framework for 5G era critical data services

Marek Lóderer, Marek Vančo, Viera Rozinajová, Gabriel-Miro Muntean, Pavol Podhradský, Gregor Rozinaj; SLOVAKIA/IRELAND
EduVirtual - Modern Educational Platform based on Multimedia Technologies

13:00 - 20:00 **EXCURSION BY SHIP**
Meeting Point: Hotel "Funimation", Main Entrance, 12:45
Lunch will be served on board the ship

Wednesday, 25 September 2019

9:00 - 14:00 **Registration**

HALL A

Wednesday, 25 September 2019

9:00 - 10:30 **SESSION 4: Image and Video Processing 2**

Session Chairs: Mario Muštra, Mario Vranješ

Ladislav Vizváry, Dominik Sopiak, Miloš Oravec, Zuzana Bukovčiková; SLOVAKIA
Image Quality Detection Using The Siamese Convolutional Neural Network

Memtimin Mahmut, Yakup Genc; TURKEY
A Deep-Learning Approach to Optical Character Recognition for Uighur Language

Schori Damian, Anken Thomas, Seatovic Dejan; SWITZERLAND
Using Fully Convolutional Networks for Rumex Obtusifolius segmentation, a preliminary Report

Juraj Kacur, Jaroslav Polec, Filip Csóka; SLOVAKIA
Eye Tracking and KNN Based Detection of Schizophrenia

Ingmar Besic, Kerim Hodzic, Almir Karabegovic; BOSNIA AND HERZEGOVINA
E-Learning Remote Laboratory Station for Computer Aided Design

10:30 - 11:00 **Coffee Break**

11:00 - 12:30 **SESSION 6: Robotics**

Session Chairs: Mario Muštra

Denis Stogl, Peter Wern, Björn Hein, Dennis Hartmann; GERMANY
Spatial Control Actions for a Physical Training with a Smart Walker

Emir Alagić, Jasmin Velagić, Adnan Osmanović; BOSNIA AND HERZEGOVINA
Design of Mobile Robot Motion Framework based on Modified Vector Field Histogram

Dino Živojević, Jasmin Velagić; BOSNIA AND HERZEGOVINA
Path Planning for Mobile Robot using Dubins-curve based RRT Algorithm with Differential Constraints

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

14:00 - 15:30 **SESSION 10: Smart Systems**

Session Chairs: Jelena Božek, Lidija Mandić

Darijan Marčetić, Slobodan Ribarić; CROATIA

A Fuzzy Logic-based Approach to Detection of Abnormal Crowd Behaviour

Boris Puterka, Juraj Kacur, Jarmila Pavlovicova; SLOVAKIA

Windowing for Speech Emotion Recognition

Jesenska Pibernik, Jurica Dolić, Alen Vistid, Lidija Mandić; CROATIA

Time Affordance Components impact on User's Experience

Irena Petrijevčanin Vuksanović; CROATIA

Analysis of Possibilities for the Establishment and Implementation of Cyber Security in the Republic of Croatia

Danijel Vlahović, Srećko Mimica; CROATIA

Perspectives of Digital radio development in Croatia

Renato Ivče, Astrid Zekić, Radoslav Radonja, Bruno Reljac; CROATIA

Emission Inventory of ships calling at the Port of Bršica (Bay of Raša)

15:45 **CLOSING SESSION (HALL B)**

9:00 - 10:30 **SESSION 5: Antennas and Propagation**

Session Chairs: **Krešimir Malarić, Mario Muštra**

**Andrey I. Semenikhin, Diana V. Semenikhina, Yury V. Yukhanov,
Pavel V. Blagovisnyy; RUSSIA**

Reduction and Cancellation of the RCS of Cylindrical Surfaces Using Conformal Digital 1-bit Meta-covers

Yury Yukhanov, Tatiana Privalova, Timur Amirokov; Egor Privalov; RUSSIA

Synthesis of a Two-focal Impedance Reflector of Arbitrary Shape

Ricards Porins, Peteris Apse-Apsitis, Edgars Grinfogels; LATVIA

Human Body Influence On A Parallel Plate Capacitance

Domagoj Bilandžija, Davor Vinko, Ivan Biondić; CROATIA

Achieving Uniform Magnetic Field with Rectangular Coil in Wireless Power Transmission System

10:30 - 11:00 **Session Break**

11:00 - 12:30 **SESSION 7: Radar and Navigation Systems**

Session Chairs: **Tomislav Kos, Josip Vuković**

Tareq Al-Nuaim, Mubashir Alam; SAUDI ARABIA

Low-Cost Implementation of a Multiple-Input Multiple-Output Radar Prototype for Drone Detection

Danny McFadden, Ruth Lennon, John O'Raw; IRELAND

AIS Transmission Data Quality: Identification of Attack Vectors

Ishita Gulati, Handong Li, Rajesh Tiwari, Martin Johnston, Satnam Dlay; UK

Investigation of Ionospheric-Phase Scintillation at Middle-Latitude Receiver Station

Blaž Pongrac, Dušan Gleich; SLOVENIA

Overview of Data Analysis Techniques of Frequency-Domain Terahertz Spectroscopy

Josip Vuković, Ema Basta, Anamarija Katalenac, Tomislav Kos; CROATIA

Alternatives for GNSS Timing in Croatia

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

14:00 - 15:30

SESSION 10: Power Electronics and Automation

Session Chairs: Mario Muštra, Josip Vuković

Mehmet Fatih CANKURTARAN, Ali Eren KOCAMIŞ; TURKEY

Sensorless Speed Control of PMDC Motor with Cascade PI Controller

Davor Vinko, Ivan Biondić, Domagoj Bilandžija; CROATIA

Impact of Receiver Power and Coupling Coefficient on Resonant Frequency in Wireless Power Transfer System

Dmitry Baimel, Saad Tapuchi, Nina Baimel, Yoram Horen, Svetlana Bronstein; ISRAEL

Cascaded 13-Level Inverter Operated in Over-Modulation Mode by Phase Shifted Depenbrock's DPWM1

Árpád Kis, Cosmin Ancuti, Codruta O. Ancuti; SPAIN/ROMANIA

ATS-PCB: An Effective Automated Testing System for ADAS

15:45

CLOSING SESSION