

## ELMAR-2020 PROGRAM

Monday, 14 September 2020	Tuesday, 15 September 2020
8:30 - 16:00 <b>Registration</b>	8:45 - 11:15 <b>Registration</b>
9:00 - 9:45 <b>OPENING SESSION: Welcome Speeches</b>	9:00 - 10:40 <b><u>SS</u>: Intelligent Transport Systems</b> <b><u>S5</u>: Computer Vision</b>
9:45 - 10:30 <b>Opening Cocktail</b>	
10:30 - 12:30 <b>PLENARY SESSION: Keynote Talks</b>	10:40 - 11:10 <b>Coffee Break</b>
12:30 - 14:00 <b>Lunch Break</b>	11:10 - 12:50 <b><u>S6</u>: Wireless Communications and Automation</b> <b><u>S7</u>: Computer Vision 2</b>
14:00 - 15:30 <b><u>S1</u>: Antennas and Propagation</b> <b><u>S2</u>: Multimedia Processing</b>	
15:30 - 16:00 <b>Coffee Break</b>	12:50 – 13:00 <b>CLOSING SESSION</b>
16:00 - 17:00 <b><u>S3</u>: Antennas and Propagation 2</b> <b><u>S4</u>: Multimedia Processing 2</b>	13:00 - 14:00 <b>Lunch Break</b>
21:00 <b>ELMAR-2020 SYMPOSIUM GALA DINNER</b>	15:00 - 20:00 <b>EXCURSION</b> <i>Meeting at 14:45</i>

# ELMAR-2020 PROGRAM

**Monday, 14 September 2020**

8:30 - 16:00 <b>Registration</b>	
<b>HALL A</b>	
9:00 - 9:45	<b>OPENING SESSION: Welcome Speeches</b>
9:45 - 10:30 <b>Opening Cocktail</b>	
<b>HALL A</b>	
10:30 - 12:30	<b>PLENARY SESSION: Keynote Talks</b>
12:30 - 14:00 <b>Lunch Break</b>	
<b>HALL A</b>	<b>HALL B</b>
14:00 - 15:30 <b>SESSION 1: Antennas and Propagation</b>	14:00 - 15:30 <b>SESSION 2: Multimedia Processing</b>
15:30 - 16:00 <b>Coffee Break</b>	
<b>HALL A</b>	<b>HALL B</b>
16:00 - 17:00 <b>SESSION 3: Antennas and Propagation 2</b>	16:00 - 17:00 <b>SESSION 4: Multimedia Processing 2</b>
<p>21:00</p> <p><b>ELMAR-2020 SYMPOSIUM GALA DINNER</b></p> <p><u>Meeting Point:</u> Hotel "Funimation", 21:00</p>	

# ELMAR-2020 PROGRAM

**Tuesday, 15 September 2020**

8:45 - 11:15 <b>Registration</b>	
<b>HALL A</b>	<b>HALL B</b>
9:00 - 10:40 <b>SPECIAL SESSION:</b> <b>Intelligent Transport Systems</b>	9:00 - 10:40 <b>SESSION 5:</b> <b>Computer Vision</b>
10:40 - 11:10 <b>Coffee Break</b>	
11:10 - 12:50 <b>SESSION 6:</b> <b>Wireless Communications and Automation</b>	11:10 - 12:50 <b>SESSION 7:</b> <b>Computer Vision</b>
<b>HALL A</b>	
12:50 - 13:00 <b>CLOSING SESSION</b>	
13:00 - 14:00 <b>Lunch Break</b>	
15:00 - 20:00 <b>EXCURSION</b> <u>Meeting Point:</u> Hotel "Funimation", Main Entrance, 14:45	

# Monday, 14 September 2020

8:30 - 16:00      **Registration**

**HALL A**

**Monday, 14 September 2020**

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**

**Assoc. Prof. Dubravko Babić; CROATIA**

FERSAT: Characterizing Light Pollution Using a Cubesat

**Assoc. Prof. Edouard Ivanjko; CROATIA**

Development of Adaptive Traffic Signal Control Systems for Urban Environments

12:30 - 14:00      **Lunch Break**

14:00 - 15:30      **SESSION 1: Antennas and Propagation**

**Session Chairs:**    **Marko Bosiljevac, Josip Lončar**

**Mario Kupresak, Tomislav Marinovic, Xuezhi Zheng, Guy Vandenbosch, Victor Moshchalkov; BELGIUM**

Nonlocal Hydrodynamic Response of Plasmonic Structures at Deep-nanometer Scale

**David Chulia Mena, Cesar Miro Garcia, Marko Bosiljevac, Zvonimir Šipuš; CROATIA**

Radiation Efficiency of Implanted Antennas: Evaluation of Antenna Encapsulation and Position in Different Canonical Body Models

**Josip Lončar, Zvonimir Šipuš; CROATIA**

Challenges in Design of Power-amplifying Active Metasurfaces

**Ante Brizić, Katarina Lebo, Silvio Hrabar; CROATIA**

Equivalent-circuit-based Stability Analysis of non-Foster OCS Negative Inductor

15:30 - 16:00      **Coffee Break**

16:00 - 17:00      **SESSION 3: Antennas and Propagation 2**

**Session Chairs:**    **Marko Bosiljevac, Josip Lončar**

**Leo Vincelj, Silvio Hrabar; CROATIA**

Dynamical Behavior of Non-Foster Self-oscillating Antenna

**Damir Muha, Krešimir Malarić, Nikola Banović; CROATIA**

Testing Electromagnetic Properties of Metal Density in Shielded Fabric

**Yury Yukhanov, Tatiana Privalova, Egor Privalov; RUSSIA**

Synthesis of Impedance Plane Re-Reflecting Several Incident E-Polarized Plane Waves in Given Direction

21:00                    **ELMAR-2020 SYMPOSIUM GALA DINNER**  
Meeting Point: Hotel "Funimation", 21:00

14:00 - 15:30      **SESSION 2: Multimedia Processing**

**Session Chairs:**    **Sonja Grgić, Lidija Mandić**

**Amina Tanković, Alen Begović, Nermin Goran; BOSNIA AND HERZEGOVINA**

On using simple Android-based hand-held units for xDSL loop qualification/troubleshooting

**Viktor Lančarič, Marek Galinski, Ivan Kotuliak; SLOVAKIA**

Direct data flow bandwidth evaluation in SDN environment

**Jelena Vlaović, Snježana Rimac-Drlje, Drago Žagar; CROATIA**

Influence of Segmentation Parameters on Video Quality in Dynamic Adaptive Streaming

**Rustam Latypov, Evgeni Stolov; RUSSIA**

A New Method Towards Speech Files Local Features Investigation

15:30 - 16:00      **Coffee Break**

16:00 - 17:00      **SESSION 4: Multimedia Processing 2**

**Session Chairs:**    **Snježana Rimac-Drlje, Mario Muštra**

**Nermin Goran, Alen Begović, Namir Škaljo; BOSNIA AND HERZEGOVINA**

Adjacent image correlation for video quality assessment

**Hrvoje Ditrih, Sonja Grgić; CROATIA**

PhotoGrade – Fast and Effective Application for Digital Photo Editing

**Tomislav Koretić, Lidija Mandić, Ana Agić, Jesenka Pibernik; CROATIA**

Developing Application for Virtual Reality

21:00                    **ELMAR-2020 SYMPOSIUM GALA DINNER**  
Meeting Point: Hotel "Funimation", 21:00

## Tuesday, 15 September 2020

8:45 - 11:15      **Registration**

**HALL A**

**Tuesday, 15 September 2020**

9:00 - 10:40      **SPECIAL SESSION: Intelligent Transport Systems**

**Session Chair:      Mario Muštra, Sadko Mandžuka**

**Dominik Cvetek, Mario Muštra, Niko Jelušić, Borna Abramović; CROATIA**  
Traffic Flow Forecasting at Micro-locations in Urban Network using Bluetooth Detector

**Mladen Miletić, Krešimir Kušić, Martin Gregurić, Edouard Ivanjko; CROATIA**  
State Complexity Reduction in Reinforcement Learning based Adaptive Traffic Signal Control

**Martin Gregurić, Krešimir Kušić, Filip Vrbanić, Edouard Ivanjko; CROATIA**  
Variable Speed Limit Control Based on Deep Reinforcement Learning: A Possible Implementation

**Mladen Miletić, Krešimir Kušić, Martin Gregurić, Daniela Koltovska Nečoska, Edouard Ivanjko, Hrvoje Kalinić; CROATIA, NORTH MACEDONIA**  
Creating A Data-Set For Sustainable Urban Mobility Analysis: Lessons Learned

**Anam Tahir, Jari Böling, Mohammad-Hashem Haghbayan, Juha Plosila; FINLAND**  
Development of a Fault-Tolerant Control System for a Swarm of Drones

10:40 - 11:10      **Coffee Break**

11:10 - 12:50

**SESSION 6: Wireless Communications and Automation**

**Session Chairs:** Dario Bojanjac, Gordan Šišul

**Lucija Šikić, Jasna Janković, Petar Afrić, Marin Šilić, Željko Ilić, Hrvoje Pandžić, Marijan Živić, Matija Džanko; CROATIA**

A Comparison of Application Layer Communication Protocols in IoT-enabled Smart Grid

**Filip Turčinović, Josip Vuković, Slaven Božo, Gordan Šišul; CROATIA**

Analysis of LoRa Parameters in Real-World Communication

**Jasmin Velagić, Adnan Osmanović, Dinno Koluh, Adnan Karzić; BOSNIA AND HERZEGOVINA**

Adaptive Control of Hard Disk Drive Servo System

**Petar Kolar, Filip Turčinović, Dario Bojanjac; CROATIA**

Experiences with Online Education During the COVID-19 Pandemic–Stricken Semester

**Mikhail Belkin, Aleksei Alyoshin, Dmitriy Fofanov, Vladislav Golovin, Yuri Tyschuk; RUSSIA**

Studying Microwave-Photonics-Based Super-Wide Bandwidth Transceiver for High Resolution Radar Applications

12:50 - 13:00

**CLOSING SESSION**

13:00 - 14:00

**Lunch Break**

15:00 - 20:00

**EXCURSION**

Meeting Point: Hotel "Funimation", Main Entrance, 14:45



9:00 - 10:40      **SESSION 5: Computer Vision**

**Session Chairs:**    Irena Galić, Josip Vuković

**Darko Mihalić, Darijan Marčetić, Slobodan Ribarić; CROATIA**  
An Approach to Crowd Segmentation at Macroscopic Level

**Ivana Žeger, Sonja Grgić; CROATIA**  
An Overview of Grayscale Image Colorization Methods

**Lavinia Ferariu, Mihaela Mihai; ROMANIA**  
CNN-Based Cascade with Skipping Connections for Semantic Segmentation

**Marija Habijan, Danilo Babin, Irena Galić, Hrvoje Leventić, Lazar Velicki, Milenko Čanković; CROATIA, BELGIUM, SERBIA**  
Centerline Tracking of the Single Coronary Artery from X-ray Angiograms

10:40 - 11:10      **Coffee Break**

11:10 - 12:50      **SESSION 7: Computer Vision 2**

**Session Chairs:**    Lidija Mandić, Mario Muštra

**Marija Habijan, Irena Galić, Hrvoje Leventić, Krešimir Romić, Danilo Babin; CROATIA, BELGIUM**  
Abdominal Aortic Aneurysm Segmentation from CT Images using Modified 3D U-Net with Deep Supervision

**Martin Gajdoš, Zuzana Bukovčiková, Dominik Sopiak, Miloš Oravec; SLOVAKIA**  
Dataset modification captured in uncontrolled conditions

**Krešimir Romić, Irena Galić, Hrvoje Leventić, Marija Habijan; CROATIA**  
SVM based column-level approach for crosswalk detection in low-resolution images

**Jasmin Velagić, Tarik Omeragić; BOSNIA AND HERZEGOVINA**  
Tracking of Moving Objects Based on Extended Kalman Filter

12:50 - 13:00      **CLOSING SESSION (Hall A)**

13:00 - 14:00      **Lunch Break**

15:00 - 20:00      **EXCURSION**  
Meeting Point: Hotel "Funimation", Main Entrance, 14:45