

ICEST 2020 Sessions

Computer Systems and Internet Technologies I (CIT.1)

Thursday, September 10

9⁰⁰ - 11⁰⁰

Chairs:

Bratislav Predić, *University of Niš, Serbia*

Aleksandar Dimitrijević, *University of Niš, Serbia*

CIT1.1 (ICEST2020_14)

PIC Microcontroller Module in a Flexible Microprocessor Development System

Valentina Rankovska and Goran Goranov

CIT1.2 (ICEST2020_15)

Efficient Discovery of Bent Function Using Reed-Muller Subsets

Miloš Radmanović

CIT1.3 (ICEST2020_33)

Multilayer Long Short-Term Memory (LSTM) Neural Networks in Time Series Analysis

Nemanja Malinović, Bratislav Predić and Miloš Roganović

CIT1.4 (ICEST2020_27)

Computer Visualization of Geometry of Polynomial Roots

Ivan Petković and Petar Rajković

CIT1.5 (ICEST2020_73)

Continuous 2D Maps Based on Spherical Cube Datasets

Aleksandar Dimitrijević and Peter Strobl

CIT1.6 (ICEST2020_03)

Simulation Environment for Optimal Resource Planning During COVID-19 Crisis

Nenad Petrović

CIT1.7 (ICEST2020_59)

Tackling the COVID-19 Conspiracies: The Data-Driven Approach

Nenad Petrović

Computer Systems and Internet Technologies II (CIT.2)

Thursday, September 10

11⁰⁰ – 13⁰⁰

Chairs:

Dragan Janković, *University of Niš, Serbia*

Nenad Petrović, *University of Niš, Serbia*

CIT2.1 (ICEST2020_06)

Augmented and Virtual Reality Web Applications for Music Stage Performance

Nenad Petrović

CIT2.2 (ICEST2020_21)

The Application of Search Engine Optimization in Internet Marketing

Aleksandar Andonov

CIT2.3 (ICEST2020_75)

Improving the Concept of Medicine Vending Machine in the Light of COVID-19 and Other Pandemics

Dragan Jankovic, Aleksandar Milenkovic and Andjelija Djordjevic

CIT2.4 (ICEST2020_76)

Smart Health Services for Epidemic Control

Aldina Avdic, Ulfeta Marovac and Dragan Jankovic

CIT2.5 (ICEST2020_35)

Syntax Analysis of Serbian Language using Context-free Grammars

Teodora Đorđević and Suzana Stojković

CIT2.6 (ICEST2020_61)

Signaling in 4G/5G with NB-IoT support in 5G Option 3

Martina Janakieska, Pero Latkoski and Vladimir Atanasovski

CIT2.7 (ICEST2020_11)

Supervision and Monitoring System of the Power Line Poles Using IIoT Technology

Milos Djordjevic, Jana Vracar and Aleksandra Stojkovic

Engineering Education (EE)

Thursday, September 10

13³⁰ – 15³⁰

Chairs:

Galia Marinova, *Technical University of Sofia, Bulgaria*

Kalin Dimitrov, *Technical University of Sofia, Bulgaria*

EE.1 (ICEST2020_53)

Low Cost Laboratory Environment for the Use of Optical Methods for Transmission of Audio Signals

Tsvetan Valkovski and Kalin Dimitrov

EE.2 (ICEST2020_55)

IMA-NET: Innovative e-Management Platform for Academic Network

Galia Marinova and Krisel Tola

EE.3 (ICEST2020_34)

Expert Tool for Filter Design Program Selection in Online-CADCOM Platform

Galia Marinova and Ognyan Chikov

EE.4 (ICEST2020_69)

Analysis of Pulse Code Modulation in MATLAB / Octave Environment

Lyubomir Laskov, Veska Georgieva and Kalin Dimitrov

EE.5 (ICEST2020_44)

Model of Project-Based Learning Platform

Ava Chikurteva and Denis Chikurtev

EE.6 (ICEST2020_25)

Practical methods for teaching of solar cell characterization

Nikola Mitrović and Milan Stojanović

EE.7 (ICEST2020_70)

Servo-system Design for Arduino Due Based Laboratory Platform

Marija Filipović, Snežana Đorđević, Vladimir Mitić and Boban Veselić

EE.8 (ICEST2020_74)

Reception of audio signals received from different angles by optical methods

Tsvetan Valkovski

Energy Systems and Efficiency I (ESE1)

Thursday, September 10

16⁰⁰ – 18⁰⁰

Chairs:

Mitko Kostov, *St. Kliment Ohridski University, Bitola*

Aleksandar Janjić, *University of Niš, Serbia*

ESE1.1 (ICEST2020_20)

Application of Neural Networks for Short Term Load Forecasting in Power System of North Macedonia

Goran Veljanovski, Metodija Atanasovski, Mitko Kostov and Pande Popovski

ESE1.2 (ICEST2020_32)

Fuzzy Multiple Linear Regression for the Short-Term Load Forecast

Andrija Petrusic and Aleksandar Janjic

ESE1.3 (ICEST2020_23)

Power Load Forecast for North Macedonia Using Machine Learning

Pande Popovski, Mitko Kostov, Metodija Atanasovski and Goran Veljanovski

ESE1.4 (ICEST2020_58)

K-Nearest Neighbor Regression for Forecasting Electricity Demand

Metodija Atanasovski, Mitko Kostov, Blagoja Arapinoski and Mile Spirovski

ESE1.5 (ICEST2020_71)

MATLAB Simulation of Grid-Connected Photovoltaic System

Pande Popovski, Natasa Mojsoska and Blagoja Stevanovski

ESE1.6 (ICEST2020_42)

Influence of reduction factors on high voltage cables on the transfer of potentials in the network

Nikolce Acevski, Angela Micevska and Ana Manivilovska

ESE1.7 (ICEST2020_13)

Evaluation of Reliability of Power Substation Considering the Uncertainty of the Distributed Generation

Atanas Iliev, Dimitar Dimitrov and Natasha Dimishkovska

ESE1.8 (ICEST2020_28)

Reduction of Energy and Power Losses in Distribution Network Using Energy Storage Systems

Nikola Krstić

Energy Systems and Efficiency II (ESE2)

Thursday, September 10

18⁰⁰ – 20⁰⁰

Chairs:

Metodija Atanasovski, *St. Kliment Ohridski University, Bitola*

Blagoja Arapinoski, *St. Kliment Ohridski University, Bitola*

ESE2.1 (ICEST2020_05)

Design and Regulation of the HF Inverter for Contactless Power Transfer Systems

Nikolay Madzharov and Desislav Iliev

ESE2.2 (ICEST2020_72)

Analysis of Electromagnetic Characteristics of Asynchronous Induction Machine

Igor Sterjovski, Blagoja Arapinoski, Metodija Atanasovski and Vesna Ceselkovska

ESE2.3 (ICEST2020_24)

Comparison of methods for control of linear induction motors

Bojidar Markov and Diana Markova

ESE2.4 (ICEST2020_39)

Sensible Thermal Energy Storage Systems Used in Buildings

Milena Haralampieva, Rosen Petrov and Veneta Yosifova

ESE2.5 (ICEST2020_37)

The Cost of Indecision in Energy Efficiency. A Cost of Opportunity Analysis for an industrial consumer

Ioan Bitir-Istrate, Cristian Gheorghiu and Miruna Castravete

ESE2.6 (ICEST2020_46)

Industrial Bodies with Innovative Shape for Energy Efficiency and Better Production

Dimitar Karastoyanov, Stanislav Gyoshev, Rosen Petrov and Milena Haralampieva

Signal Processing I (SP.1)

Friday, September 11

9⁰⁰ - 10³⁰

Chairs:

Zoran Perić, *University of Niš, Serbia*

Biljana Stosić, *University of Niš, Serbia*

SP1.1 (ICEST2020_43)

The Effects of Coefficient Quantization on New CIC FIR Filters

Biljana Stosić

SP1.2 (ICEST2020_08)

Improvement of energy efficiency of PAM constellation by applying optimal companding quantization in constellation designing

Slobodan Vlajkov, Aleksandra Jovanović and Zoran Perić

SP1.3 (ICEST2020_19)

The influence of compression parameter μ on the energy efficiency of PAM constellation based on μ -law companding quantization

Slobodan Vlajkov, Aleksandra Jovanović and Zoran Perić

SP1.4 (ICEST2020_02)

How Initialization is related to Deep Neural Networks Generalization capability: Experimental study

Ljubinka Sandjakoska and Frosina Stojanovska

SP1.5 (ICEST2020_31)

Using Neural Networks Application for the Font Recognition Task Solution

Oleksii Bychkov, Kateryna Merkulova, George Dimitrov, Yelyzaveta Zhabska, Iva Kostadinova, Pepa Petrova, Pavel Petrov, Igljka Getova and Galina Panayotova

Signal Processing II (SP.2)

Friday, September 11

$10^{30} - 12^{00}$

Chairs:

Jugoslav Joković, *University of Niš, Serbia*

Rumen Mironov, *Technical University of Sofia, Bulgaria*

SP2.1 (ICEST2020_47)

Adaptive 3D Interpolation of Images

Rumen Mironov

SP2.2 (ICEST2020_52)

Noise Adaptive Wiener Filtering of Images

Lora Petkova and Ivo Draganov

SP2.3 (ICEST2020_12)

Along-Track and Cross-Track Noise Analysis of Minimal Curvature On Mars Orbiter Laser Altimeter Data

Nicole Christoff and Agata Manolova

SP2.4 (ICEST2020_54)

Analysis for Watermark in Medical Image using Watermarking with Wavelet Transform and DCT

Stoyan Kushlev and Rumen Mironov

Microwaves, Antennas and Propagation (MAP)

Friday, September 11

12³⁰ – 15⁰⁰

Chairs:

Vera Marković, *University of Niš, Serbia*

Zlatica Marinković, *University of Niš, Serbia*

MAP.1 (ICEST2020_63)

On the gas sensing properties of microwave transducers

Giovanni Gugliandolo, Mariangela Latino, Giuseppe Campobello, Zlatica Marinkovic, Giovanni Crupi and Nicola Donato

MAP.2 (ICEST2020_67)

Artificial neural network modeling of interdigital capacitor sensor for oxygen detection

Zlatica Marinkovic, Giovanni Gugliandolo, Mariangela Latino, Giuseppe Campobello, Giovanni Crupi and Nicola Donato

MAP.3 (ICEST2020_78)

Analysis of Dual Band PA Nonlinear Performances by Application of Digital Linearisation Model

Aleksandar Atanaskovic, Aleksandra Đorić and Natasa Males-Ilic

MAP.4 (ICEST2020_68)

Design of Asymmetrical Slot Antenna Array in Corner Reflector

Marija Milijic and Branka Jokanovic

MAP.5 (ICEST2020_09)

Radar Antenna Array Designing for Unmanned Aerial Vehicles (UAV)

Ivaylo Nachev and Peter Petkov

MAP.6 (ICEST2020_48)

Design of well-matched Microwave Slot Antenna on a Flat Metal Grounded Plate using Neural Model

Zoran Stankovic, Nebojsa Doncov, Biljana Stosic, Maja Sarevska, Ivan Milovanovic

MAP.7 (ICEST2020_51)

An Automatic System for Antenna Radiation Pattern Measurement

Ilija Iliev and Ivaylo Nachev

MAP.8 (ICEST2020_65)

Inverse Reading of ITU-R P.1546 Propagation Curves for the Broadcast Transmitter EM Field Level

Milos Radojkovic, Olivera Pronić'Rančić and Zlatica Marinkovic

MAP.9 (ICEST2020_16)

GPU-Enabled Simulation of a Combined Macrodiversity System in Gamma-Shadowed Nakagami-m Fading Channel

Nenad Petrović, Dejan Milić, Suad Suljović, Samir Koničanin and Selena Vasić

Measurements, Control Systems and ICT (ECI)

Friday, September 11

15⁰⁰ – 17³⁰

Chairs:

Aleksandar Atanasković, *University of Niš, Serbia*

Rosen Miletiev, *Technical University of Sofia, Bulgaria*

ECI.1 (ICEST2020_07)

Measurement and analysis of PM particles emitted by automotive brakes

Rosen Miletiev, Emil Iontchev and Rumens Yordanov

ECI.2 (ICEST2020_17)

Investigation of the method of RMS measurement based on moving averaging

Anna Kostina, Plamen Tzvetkov and Andrey Serov

ECI.3 (ICEST2020_36)

Monitoring of Air Pollution in Skopje in Order to Determine Possible Causes

Vladimir Mijakovski and Monika Lutovska

ECI.4 (ICEST2020_56)

Load Disturbance Rejection in Hydro Turbine Control Based on Wiener Filtering

Teofana Puleva and Elena Haralanova

ECI.5 (ICEST2020_57)

Multi-Objective LMI Based Robust State-Feedback Design of a Hydro Generator Speed Controller

Andrey Yonchev and Teofana Puleva

ECI.6 (ICEST2020_18)

Impact of microclimate changes and noise to workers as a part of an implemented Health and Safety System

Ivo Kuzmanov and Roberto Pasic

ECI.8 (ICEST2020_49)

Hardware implementation and comparison of CRA and TRA when trying to recover the AES-128 key

Ivaylo Vladimirov, Desislava Nikolova and Zornitsa Terneva

ECI.9 (ICEST2020_50)

Software implementation of CRA and TRA to recover the AES-128 key using side-channel signals with Python3

Desislava Nikolova, Ivaylo Vladimirov and Zornitsa Terneva