

SAUM 2018 CONFERENCE

**PRELIMINARY PROGRAM**

SESSIONS OVERVIEW

Wednesday, November 14, 2018		
<i>Time</i>	<i>Activities</i>	<i>Place</i>
09:30 – 10:30	<b>Registration</b>	Lobby M
10:30 – 11:00	<b>Opening Ceremony</b>	Room 1
11:00 – 11:45	<b>Welcome Cocktail</b>	Lobby M
11:45 – 13:30	<b>Plenary Session I</b>	Room 1
13:30 – 15:30	<b>Break</b>	
15:30 – 17:30	<b>Session A:</b> Information and Communication Technologies I	Room 2
15:30 – 17:30	<b>Session B:</b> Measurements and Instrumentation	Room 3
15:30 – 17:30	<b>Session C:</b> System Identification and Modeling	Room 4
	<b>Coffee Break</b>	Lobby E
17:30 – 19:00	<b>Session D:</b> Information and Communication Technologies II	Room 2
17:30 – 19:00	<b>Session E:</b> Mechatronics and Robotics I	Room 3
20:00	<b>Conference Dinner</b>	

Thursday, November 15, 2018		
<i>Time</i>	<i>Activities</i>	<i>Place</i>
10:00 – 11:45	<b>Session F:</b> Renewable and Non-Conventional Energy Sources. Energy Systems I	Room 2
10:00 – 11:45	<b>Session G:</b> Artificial Intelligence, G. Algorithms, N. Networks	Room 4
10:00 – 11:45	<b>Session H:</b> Industrial and Process Control	Room 3
	<b>Coffee break</b>	
12:00 – 12:30	<b>Plenary Session II</b>	Room 2
12:30 – 13:15	<b>Project Session :</b> ERASMUS + and H2020 projects presentation	Room 2
	<b>Coffee Break</b>	Lobby E
13:30 – 15:00	<b>Session I:</b> Renewable and Non-Conventional Energy Sources. Energy Systems II	Room 2
13:30 – 15:00	<b>Session J:</b> Mechatronics and Robotics II	Room 3
15:00	<b>Session Closing</b>	

Friday, November 16, 2018		
<i>Time</i>	<i>Activities</i>	<i>Place</i>
10:00 – 12:00	<b>Annual meeting of SAUM Society</b>	Room 2
12:00	<b>Conference Closing</b>	Room 2

Room 1 – 6<sup>th</sup> floor, Faculty of Mechanical Engineering (No.601)

Room 4 – 4<sup>th</sup> floor, Faculty of Mechanical Engineering (No.401)

Lobby M – 6<sup>th</sup> floor, Faculty of Mechanical Engineering

Room 2 – Faculty of Electronics, directions to the room will be marked

Room 3 – Faculty of Electronics, directions to the room will be marked

Lobby E - Faculty of Electronics, directions to the room will be marked

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## PLENARY SESSION I

Invited paper
Adriana Albu, Radu-Emil Precup, Teodor-Adrian Teban <b>Medical Applications of Artificial Neural Networks</b>

Invited Paper
B. Borovac, M. Raković, M. Gnjatović, M. Nikolić, V. Delić, M. Penčić, S. Savić, J. Tasevski, D. Mišković, A. Mikov, R. Krasnik <b>Development and Testing of Humanoid Robot MARKO – An Assistant in Therapy for Children</b>

Invited paper
V. M. Blagojević, A. M. Cvetković, P. N. Ivaniš <b>On the Capacity of SWIPT Cooperative Relaying System in Generalized Fading Environment</b>

## PLENARY SESSION II

Invited paper
A. Al-Hasaeri, A. Marjanović, S. Vujnović, P. Tadić, Ž. Đurović <b>On False Alarms Density and Detection Profile Estimation in Target Tracking Systems</b>

## Session A: INFORMATION AND COMMUNICATION TECHNOLOGIES

*Chairperson:* D.Stojanović

Session A	A1 • Regular paper
Srdjan Tegeltija, Branislav Tejic, Gordana Ostojic, Stevan Stankovski, Igor Baranovski <b>A system for meal preparation instructions based on augmented reality</b>	
Session A	A2 • Regular paper
Petar Ljubić, Bratislav Predić, Milos Roganović <b>Methods for Additional Protection of WiFi Access Authentication Protocols from Bruteforce Attacks</b>	
Session A	A3 • Regular paper
Dajana Narandžić, Sonja Ristić, Darko Stefanović, Teodora Lolić <b>The Challenge of an Extraction-Transformation-Loading Tool Selection</b>	
Session A	A4 • Regular paper
Karl Benkič <b>Challenges adopting Agile methodologies in software development or Agile in a nutshell for real-working environments</b>	

Session A	A5 • Regular paper
Ivan Miković, Mladen Radišić, Darko Stefanović, Peđa Milosavljević <b>Founding corporate incubators within ICT companies: investment opportunity or unjustifiable risk</b>	
Session A	A6 • Regular paper
Aleksandra Stojnev Ilić, Dragan Stojanović <b>Remote Monitoring of People's Health and Activities based on Big Data Analytics</b>	
Session A	A7 • Regular paper
Ivan Kotsev, Dobromir Gaydazhiev, Simeon Kostadinov and Ivan Uzunov <b>Evaluation of Electromigration Effects in Sub-100nm IC Design</b>	
Session A	A8 • Regular paper
Pancho Tomov, Lubomir Dimitrov <b>The Role of Digital Information Models for Horizontal and Vertical Interaction in Intelligent Production</b>	

### **Session B: MEASUREMENTS AND INSTRUMENTATION**

***Chairperson: D. Denić***

Session B	B1 • Regular paper
Ivana Stojkovic, Goran Miljkovic, Dragan Denic <b>Virtual instrumentation using pseudorandom binary arrays for position determination</b>	
Session B	B2 • Regular paper
Dejan Mirković, Milena Stanojlović Mirković <b>Automation of Standard Cell Characterization in 180nm CMOS process using Open Command Environment for Analysis</b>	
Session B	B3 • Regular paper
Dragana Jovanović, Zlata Cvetković, Saša Ilić, Žaklina J. Mančić <b>Conductor with different cross section near two grounded conductive strips with finite width</b>	
Session B	B4 • Regular paper
Ana Plazinić, Milka Potrebić, Zlata Cvetković <b>Microwave bandpass filter design using a triple-mode resonator</b>	
Session B	B5 • Regular paper
Srdjan Đorđević, Milan Simić <b>Appliance level load monitoring based on the steady-state harmonic analysis</b>	
Session B	B6 • Regular paper
Žiga Matjašec <b>Fully automatic, 3-phase transformer turns-ratio and winding resistance measurement device</b>	
Session B	B7 • Regular paper
Aleksandar Jocić, Zoran Perić, Dragan Denić, Goran Miljković <b>Quality Determination of a Digitized ECG Signal Based on Useful Intervals</b>	
Session B	B8 • Regular paper
Nikola Nešić, Dragan B. Jovanović and Dušan Stojiljković <b>Experimental investigation of the influence of crack on the frequency of prismatic beam oscillations</b>	

## **Session C: SYSTEM IDENTIFICATION AND MODELING, APPLIED MATHEMATICS**

*Chairperson: M.Milojković*

Session C	C1 • Regular paper
D. Šešlija, S. Čajetinac, M. Todorović, I. Terzić <b>Modeling and simulation of pneumatic actuator with Pulse Width Modulation control</b>	
Session C	C2 • Regular paper
V.Stojanović, D.Pršić <b>Joint estimation of linear state-space models under non-Gaussian noises</b>	
Session C	C3 • Regular paper
Marko Mančić, Dragoljub Živković, Milena Nebojša Rajić, Milan Djordjević <b>A Trnsys Model of a Polygeneration Energy Supply System</b>	
Session C	C4 • Regular paper
N. Danković, D.Antić, S.Nikolić, M.Milojković, S.Perić <b>New class of digital orthogonal filters based on bilinear transformation with one application</b>	
Session C	C5 • Regular paper
D. Milošević, D.Stević, M.Milošević, B.Randelović, A.Milošević <b>FCM algorithm for the classification of natural ambient from multispectral Landsat 7 images</b>	
Session C	C6 • Regular paper
P.Rajković, M.Stanković, S. Marinković <b>Generalizations of the Gamma function: their connection formulas and numerical computation</b>	
Session C	C7 • Regular paper
M.Rašić, M.Radić, Z.Stajić <b>Application of Analytic Hierarchy Process to High Voltage Transformers' Maintenance</b>	

## **Session D: INFORMATION AND COMMUNICATION TECHNOLOGIES II**

*Chairperson: D.Milić*

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Nikola Simić, Zoran Perić, Bojan Denić, Milan Tančić <b>Speech Signal Coding Scheme Based on Multibit Delta Modulation and LMS algorithm</b>	
Session D	D2 • Regular paper
Zoran Perić, Bojan Denić, Vladimir Despotović, Nikola Simić <b>Delta Modulation with Improved Prediction and Quasilogarithmic Quantizer for Laplacian Source</b>	
Session D	D3 • Regular paper
Nenad Milošević, Dejan Milić, Zorica Nikolić, Ivica Marjanovic, Mihajlo Stefanović <b>Outage Probability of Interference Limited Double <math>\alpha</math>-<math>\mu</math> Fading Channel</b>	
Session D	D4 • Regular paper
Milica D. Jovanović, Sandra M. Došić, Igor Z. Stojanović <b>Analysis of Ultra-Wideband Localization Techniques Source</b>	
Session D	D5 • Regular paper
Goran T. Đorđević, Milica Petković <b>Analysis of Outage Probability of Switch-and-Stay Receiver over Fisher–Snedecor F Fading</b>	

<b>Channel</b>	
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### **Session E: MECHATRONICS AND ROBOTICS I**

*Chairperson: I. Ćirić*

Session E	E1 • Regular paper
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Laslo Tarjan, Branislav Tejić, Srđan Tegeltija, Ivana Šenk, Miloš Stanojević <b>An alternative communication network based on LPWAN IoT-based RF modules</b>	
Session E	E3 • Regular paper
Jelena Eric Obucina, Stevan Stankovski, Gordana Ostojic, Stanimir Cajetinac, Slobodan Aleksandrov <b>Application of Frequency Converter in Hydraulic System</b>	
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*Chairperson: M. Petronijević*

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*Chairperson: Ž. Čojbašić*

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M. Kovandžić, V. Nikolić, R. Nikolić, M. Stojičić, D.Knežević <b>Temporal Properties of Acoustic Perception by Artificial Neural Networks using Standard Computer Equipment</b>	

### **Session H: INDUSTRIAL AND PROCESS CONTROL**

*Chairperson: M. Stojčev*

Session H	H1 • Regular paper
Saša Prodanović, Novak Nedić, Ljubiša Dubonjić <b>Some Considerations on Application of Relay Feedback Test to the Multivariable Systems</b>	
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Radmila Gerov, Zoran Jovanović <b>Comparison of PID Controller Tuning Methods based on IMC structure and gain margin for UFOPTD process</b>	

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**Project Session: ERASMUS + AND H2020 PROJECTS PRESENTATION**

*Chairperson: S. Nikolić*

Project Session	Project 1 • Presentation
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Project Session	Project 2 • Presentation
<b>Development of master curricula for natural disasters risk management in Western Balkan countries - NatRisk – ERASMUS +</b>	
Project Session	Project 3 • Presentation
<b>Strengthening of master curricula in water resources management for the Western Balkans HEIs and stakeholders SWARM – ERASMUS +</b>	
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**Session I: RENEWABLE AND NON CONVENTIONAL ENERGY SOURCES, ENERGY SYSTEMS II**

*Chairperson: J. Bogdanović-Jovanović*

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<b>Hydrostatic systems for energy recovery of mobile machines</b>	
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### Session J: MECHATRONICS AND ROBOTICS II

*Chairperson: I. Ćirić*

Session J	J1 • Regular paper
Vladislav A. Blagojevic, Saša Randelović, Saša Milanović <b>Automatic Generation of PLC Programs for Pneumatic Actuators Sequential Control with Two End Positions</b>	
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Session J	J3 • Regular paper
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Session J	J4 • Regular paper
I. Ćirić, A.Miltenović, M.Banić, M.Pavlović, E.Petrović, M. Simonović, D. Knežević <b>Intelligent Machine Vision based Railway Infrastructure Inspection and Monitoring using Drone</b>	
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