27. ТЕЛЕКОМУНИКАЦИОНИ ФОРУМ
27th TELECOMMUNICATIONS FORUM

ТЕЛФОР 2019
TELFOR 2019

ПРОГРАМ
PROGRAM

Београд, 26. и 27. новембар 2019. године
Belgrade, 26 and 27 November 2019

Сава центар
THE SAVA CENTER

WEB АПЛИКАЦИЈА И ЛОГИСТИЧКА ПОДРШКА

WEB Application and Logistic

ETF Beograd

ИЗДАВАЧИ:
Publishers:

ДРУШТВО ЗА ТЕЛЕКОМУНИКАЦИЈЕ - Београд
TELECOMMUNICATIONS SOCIETY - Belgrade

АКАДЕМСКА МИСАО - Београд
ACADEMIC MIND - Belgrade

Штампа:
Printed by:

АКАДЕМСКА МИСАО - Београд
ACADEMIC MIND - Belgrade

ISBN

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Prof. Dr Milka Potrebić, Student Section

TIME TABLE
27th Telecommunications Forum TELFOR 2019

26th November, Tuesday Morning

9:00 Start of registration - Registration desk, Sava Center , Main Hall

10:30 – 12:00 OPENING CEREMONY - Rooms 1/0 + 1A/0 + 1B/0

12:00 – 13:00 Welcome Party - Sava Center Restaurant

26th November, Tuesday Afternoon

Room Time	3/1	4/1	5/1	6/1	2/0	3/0
14:30-16:45	PRS 1 1.1-1.8	Commercial Presentations 13:00h	RC 1 3.1-3.7	SP 1 5.1-5.6	TN 1 2.1-2.6	
17:00-19:15	MWN 1 10.1-10.8	S1 11.1-11.8	RC 2 3.8-3.13	SP 2 5.7-5.11	TN 2 2.7-2.13	

Room Time	1/0	1a/0	16/0	3/0		9/0 left
14:30-16:45	13.30 IDS 14 NOKIA 15 TERI 1 16 TELEKOM 1 17 PANEL 5G	CS 1 4.1-4.9	STA 1 9.1-9.8			DP Slot 1
17:00-19:15		CS 2 4.10-4.17	STA 2 9.9-9.16			

27th November, Wednesday Morning

Room Time	3/1	4/1	5/1	6/1	2/0	
8:30-10:45	AEL 1 7.1-7.7	AEM1 6.1-6.9	STA 5 9.33-9.39	SP 3 5.12-5.18	TN 3 2.14-2.19	
11:00-13:15	AEL 2 7.8-7.13	AEM2 6.10-6.18	STA 6 9.40-9.46	SP 4 5.19-5.25	11 PROJECTS 12 BENEFIT PANEL	

Room Time	1/0	1a/0	16/0	3/0		9/0 left
8:30-10:45	9 TERI 2 10 VLATACOM	CS 3 4.18-4.26	STA 3 9.17-9.24	10:00 InfiNet Wireless 12:00 Red Piranha		MM 2 8.6-8.11
11:00-13:15	11 RATEL 12 ROAMING 13 VIP	MWN 2 10.9-10.15	STA 4 9.25-9.32			MM 1 8.1-8.5

27th November, Wednesday Afternoon

Room Time	1/0	1a/0	16/0		Japan Salon/1	9/0 left
14:30-16:45	14 CISCO 15 TELEKOM 2					
17:00-19:15						

(Please see detailed programs)

Section 1	Policy, Regulatory Aspects and Services in Communications	Room 3/1
Section 2	Telecommunications Networks	Room 2/0
Section 3	Radio Communications	Room 5/1
Section 4	Communications Systems	Room 1a/0
Section 5	Signal Processing	Room 6/1
Section 6	Applied Electromagnetics	Room 4/1
Section 7	Applied Electronics	Room 3/1
Section 8	Multimedia	Room 9/0 left
Section 9	Software Tools and Applications	Room 16/0, 5/1
Section 10	Mobile and Wireless Networks	Room 3/1, 1a/0
Section 11	Student section	Room 4/1
DP	Distance presentations	Room 9/0 left

- Room 1/0 – Special Sections: Leading international and domestic companies presentations
- Sava Center Main Hall - Exhibitions
- Room 9/0 – Public Relation, Meetings

САТНИЦА
Телекомуникациони форум ТЕЛФОР 2019

26. новембар, уторак пре подне

9:00 Почетак регистрације учесника - регистрациони пулт, хол Сава центра

10:30 – 12:00 СВЕЧАНО ОТВАРАЊЕ - Сале 1 + 1а + 1б /0

12:00 – 13:00 Коктел добродошлице, ресторан Сава центра

26. новембар, уторак после подне

Сала Време	3/1	4/1	5/1	6/1	2/0	
14:30-16:45	ПРУ 1 1.1-1.8	Комерцијалне презентације 13:00ч	РК 1 3.1-3.7	ОС 1 5.1-5.6	ТМ 1 2.1-2.6	
17:00-19:15	МБМ 1 10.1-10.8	С1 11.1- 11.8	РК 2 3.8-3.13	ОС 2 5.7-5.11	ТМ 2 2.7-2.13	

Сала Време	1/0	1а/0	1б/0		Јапански салон	9/0 лево
14:30-16:45	13.30 ИДС 14 НОКИА 15 ТЕРИ 1 16 ТЕЛЕКОМ 1 17 ПАНЕЛ 5G	СПС 1 4.1-4.9	САА 1 9.1-9.8			ПД Слот 1
17:00-19:15		СПС 2 4.10-4.17	САА 2 9.9-9.16			

27. новембар, среда пре подне

Сала Време	3/1	4/1	5/1	6/1	2/0	
8:30-10:45	ПЕЛ 1 7.1-7.7	ПЕМ 1 6.1-6.9	САА 5 9.33-9.39	ОС 3 5.12-5.18	ТМ 3 2.14-2.19	
11:00-13:15	ПЕЛ 2 7.8-7.13	ПЕМ 2 6.10-6.18	САА 6 9.40-9.46	ОС 4 5.19-5.25	11 ПРАКСА ПРОЈЕКАТА 12 BENEFIT ПАНЕЛ	

Сала Време	1/0	1а/0	1б/0	3/0	Јапански салон	9/0 лево
8:30-10:45	9 ТЕРИ 2 10 ВЛАТАКОМ 11 РАТЕЛ 12 РОУМИНГ 13 ВИП	СПС 3 4.18-4.26	САА 3 9.17-9.24	10:00 InfiNet Wireless 12:00 Red Piranha		ММ 2 8.6-8.11
11:00-13:15		МВМ 2 10.9-10.15	САА 4 9.25-9.32			ММ 1 8.1-8.5

27. новембар, среда после подне

Сала Време	3/1	4/1	5/1	6/1	2/0	
14:30-16:45						
17:00-19:15						

Сала Време	1/0	1а/0	1б/0			9а/0
14:30-16:45	14 CISCO 15 ТЕЛЕКОМ 2					
17:00-19:15						

(Видети програме у наставку)

Секција 1	Политика,регулатива и услуге у телекомуникацијама	Сала 3/1
Секција 2	Телекомуникационе мреже	Сала 2/0
Секција 3	Радио-комуникације	Сала 5/1
Секција 4	Системи преноса сигнала	Сала 1а/0
Секција 5	Обрада сигнала	Сала 6/1
Секција 6	Примењена електромагнетика	Сале 4/1
Секција 7	Примењена електроника	Сала 3/1
Секција 8	Мултимедија	Сала 9/0 лево
Секција 9	Софтверски алати и апликације	Сале 1б/0, 5/1
Секција 10	Мобилне и бежичне мреже	Сала 3/1, 1а/0
Секција 11	Студентска секција	Сала 4/1
ПД	Презентације на даљину	Сала 9/0 лево

- Сала 1/0 – Посебне секције водећих домаћих и интернационалних компанија и институција
- Централни хол Сава центра – Изложбе
- Сала 9/0 – Контакт сала, састанци

TELFOR 2019

СВЕЧАНО ОТВАРАЊЕ - Opening Ceremony

Уторак 26.11.2019. године, 10:30 часова
Tuesday 26th November, 2019, 10:30 a.m.
Сава Центар, Сале 1+1А+1В /0 - ***The Sava Center, Rooms 1 +1A+1B /0***

ПЛЕНАРНА СЕДНИЦА - Plenary Session

Увод – Introduction

Поздравне речи - Welcome Messages

Признања – Recognitions

Излагања по позиву - Invited Presentations

HURALD BAUR, ERICSSON
"5G for business – from vision to reality"

Завршне речи – Conclusions

Председник Управног одбора – ***Chairman of the Steering Committee***
Проф. др Ђорђе Пауновић – ***Prof. Dr George Paunović***

Коктел добродошлице – Welcome Reception

Домаћин – ***Host***
Друштво за телекомуникације – ***Telecommunications Society***

COMPANIES EXHIBITORS AT THE EXHIBITION
ФИРМЕ ИЗЛАГАЧИ НА ИЗЛОЖБИ

	Firma/Organization	Lokacija/Location
1	**CIP-NETWORKS d.o.o.**	A1
2	**Iritel**	A2, prezentacija
3	**KOC Communication Ltd.**	A3
4	**3NET**	A4
5	**Akademska misao**	A5
6	**Falesia systemy**	A6
7	**InfiNet Wireless**	C1, prezentacija
8	**RB GeneralEkonomik**	C2, prezentacija
9	**Netiks**	C3
10	**Maksnet telekomunikacije**	B2
11	**Red Piranha Ltd**	Prezentacija

COMMERCIAL PRESENTATIONS
КОМЕРЦИЈАЛНЕ ПРЕЗЕНТАЦИЈЕ

Компанија	Дан	Датум	Време	Сала
Company	Day of week	Date	Time	Room
IRITEL Optička transportna platforma OTN/WDM/ROADM IRITEL u 5G eri Optical Transport Platform OTN/WDM/ROADM IRITEL in the 5G era	Уторак/Tuesday	26.11	13:00 – 13:45	4/1
GENEKO – Nenad Korać, Geneko R&D Network Engineer; Milan Uzelac, Geneko BD Manager- Prednosti korišćenja DMVPN tehnologije na Geneko 3G/4G ruterima Advantages of using DMVPN technology on Geneko 3G/4G routers	Уторак/Tuesday	26.11	14:00 – 14:45	4/1
Red Piranha ltd. "Cyber Security - A MUST for everyone in the new digital age" Live Demonstration of the Red Piranha's Next Generation UTM	Среда/Wednesday	27.11	12:00 – 12:45	3/0
Infinet Wireless "Carrier Class Fixed Broadband Wireless Access Systems" Igor Fiskind	Среда/Wednesday	27.11	10:00- 10:45	3/0

Pauze od 15 minuta izmedju predavanja služe za provetravanja i čišćenje prostorija (ako je potrebno). Firme koje zakupe dvoranu na dva ili više termina mogu vreme da koriste u kontinuitetu.

ПОСЕБНЕ СЕКЦИЈЕ КОМПАНИЈА И ИНСТИТУЦИЈА

ROOM 1/0 / САЛА 1/0

SPECIAL SECTIONS FOR COMPANIES
ПОСЕБНЕ СЕКЦИЈЕ КОМПАНИЈА

November 26, Tuesday afternoon / 26. Новембар, уторак после подне

13:30 -13:55 **INICIJATIVA "DIGITALNA SRBIJA", BELGRADE**
Topic/Тема: **Inicijativa "Digitalna Srbija"**
Presenter/Предавач: **Stefan Salom, Infostud & član Upravnog Odbora DSI**

14:00 -14:55 **NOKIA, Belgrade**
Topic/Тема 1**:** **The role of Fixed Networks in 5G world**
Presenter/Предавач 1: **Ana Pešović, Fixed Networks Marketing Director**

Topic/Тема 2**:** **Digital operations for 5G**
Presenter/Предавач 2: **Walter Prior, Nokia Software Business Development Manager**

15:00-15:55 **TERI Engineering & MAVENIR**
Topics/Теме**:** **RCS I 4G/5G Open RAN**
Presenter/Предавач**:**

16:00-16:55 **TELEKOM SRBIJA 1**
Topic/Тема: **Implmentacija *telco cloud*-a u Telekomu Srbija**
Presenter/Предавач**:** **Nemanja Ognjanović**

17:00-17:55 **PANEL diskusija: "5G aukcija spektra?"**
Moderator: Prof. dr Aleksandar Nešković, Elektrotehnički fakultet u Beogradu
Učestvuju: Filip Banković, Izvršni direktor za tehniku - Telekom Srbija
Saša Leković, CTO Telenor Srbija
Nenad Zeljković, Senior tehnički direktor, Vip mobile i A1 Slovenija
Dr Vladica Tintor, direktor RATEL-a

November 27, Wednesday morning / 27. Новембар, среда пре подне

9:00-9:55 **TERI Engineering 2**
Topics/Теме**:** **- 2operate: AI and machine learning techniques for forecasting network traffic demands to help optimize energy consumption**
- ECI Telecom: 5G transport networks
Presenter/Предавач**:**

10:00-10:55 VLATACOM INSTITUT VISOKIH TEHNOLOGIJA, Beograd

Topic/Тема: **Smart City Concepts, Technologies, Applications - Vlatacom's View**

Prezenter/ Предавач: **Dr Snežana Puzović, naučni saradnik**
Dr Miljan Vučetić, naučni saradnik

11.00-11.55 RATEL, Belgrade

Topic/Тема**: Praćenje nivoa elektromagnetskog polja u Republici Srbiji**

Presenter/Предавач: **Maja Mitić**

12:00-12:55 ROAMING, Beograd

Topic/Тема: **CloaseOut Remote Quality Inspection Solution for 5G Revolution**

Prezenter/ Предавач: **Ninoslav Mitic, Enetel Solutions & Dejan Vujovic, Roaming Networks**

13:00-13:55 VIP Belgrade

Topic/Тема: **Towards AI readiness**

Presenter/Предавач: **Natali Delić, Glavni direktor za tehniku i transformaciju, Vip mobile i A1 Slovenija**

14:00-14:55 CISCO

Topic/Тема: **Cisco Tetration - How sensors are combined with machine learning and big data analytics to enable you to better secure, troubleshoot and manage your data center**

Presenter/Предавач: **Philip Stoychev Nedev, Product Sales Specialist**

November 27. Wednesday afternoon, Новембар 27. , среда после подне

15:00-15:55 TELEKOM Srbija 2

Topic/Тема**: IoT ekosistem**

Presenter/Предавач: **Vladan Nešić**

ROOM 2/0 **/ САЛА 2/0**

November 27, Wednesday morning / 27. Новембар, среда пре подне

11:00-11:55 Tehnička prezentacija

Topic/Тема: **Praksa projektovanja telekomunikacionih mreža i sistema u objektima**

Autorka prezentacije : **Mirjana Jarić – Ćirić**, **dipl. inž.,** (u prezentaciji ce biti navedeni predavači saradnici koji su obrađivali pojedine teme u okviru realizacije ciklusa predavanja o kojima se govori).

12:00-12:55 BENEFIT project panel session

Topic/Тема: **Boosting the telecommunications engineer profile to meet modern society and industry needs**

Presenter/Предавач*:* **Prof. dr Matej Zajc, Prof. dr Aljo Mujčić, Prof. dr Vlado Delić, and Doc. dr Mladen Koprivica (Project BENEFIT) and Prof. dr Nenad Zrnić (Project DualEdu)**

ПТТ МУЗЕЈ
Поштанско Телеграфско Телефонски

ИНОВАЦИЈЕ У ОБЛАСТИ КОМУНИКАЦИЈА И ТЕЛЕКОМУНИКАЦИЈА
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ПРОГРАМ АУТОРСКИХ СЕКЦИЈА
AUTHOR SECTIONS'PROGRAM

СЕКЦИЈА 1: ПОЛИТИКА, РЕГУЛАТИВА И УСЛУГЕ У ТЕЛЕКОМУНИКАЦИЈАМА (ПРУ)
TELECOMMUNICATIONS POLICY, REGULATORY ASPECTSAND SERVICES (PRS)

ПРУ 1 - Уторак, 26.11.2019. године у 14:30 - сала 3/1
PRS 1 - Tuesday, 26.11.2019, 14:30 – Hall 3/1

Председавајући: ВЛАДО ДЕЛИЋ

Chairpersons: VLADO DELIĆ

1.1. Jennyphar Kahimise, Fungai Bhunu Shava: **An analysis of children's online activities and behaviours that expose them to cybercrimes**[1)]
1.2. Zlata Radak, Marijana Petrović, Goran Marković: **Exploring possibilities to exploit QFD method in telecommunication service design: the case of business customer**
1.3. Milica Jungić, Željka Vujanić, Dragan Samardžija, Branislav M. Todorović: **Safety in Atomotive Industry: ISO 26262 Compliant Unit Testing**
1.4. Nenad Petrovic, Djordje Kocic: **Adopting linear optimization to support autonomous vehicles in smart city**
1.5. Zdenko Kljaić, Tomislav Josip Mlinarić, Danijel Pavković, Mihael Cipek, Mladen Nikšić: **Fuzzy logic-based scheduling of rail vehicles under reduced traffic flow conditions**
1.6. Ana Vesić, Sava Lakicevic, Vuk Ignjatovic, Bojan Gutic, Andrej Micovic, Hristo Skacev, Miodrag Zivkovic: **EAGRO – Digitalization in Agriculture**
1.7. Jelica Cincović, Igor Tartalja: **Iskustva razvoja programskog sistema obrazovne višeplatformske video-igre**
1.8. Jelena Rajić, Emanuilo Jovanović, Ksenija Opačić, Petar Đukić, Zaharije Radivojević, Miloš Cvetanović: **Sistem aplikacija za navigaciju unutar zatvorenog prostora**

[1)] *Paper will be presented remotely in current section*

СЕКЦИЈА 2: ТЕЛЕКОМУНИКАЦИОНЕ МРЕЖЕ (ТМ)
TELECOMMUNICATIONSNETWORKS (TN)

ТМ 1 - Уторак, 26.11.2019. године у 14:30 - сала 2/0
TN 1 - Tuesday, 26.11.2019, 14:30 – Hall 2/0

Председавајући: НЕНАД КРАЈНОВИЋ

Chairperson: NENAD KRAJNOVIĆ

2.1. Kire Jakimoski, Nidhi V. Singhai: **Improvement of Hardware Firewall's Data Rates by Optimizing Suricata Performances**

2.2. Denis I. Parfenov, Lubov S. Zabrodina, Artur Yu. Zhigalov, Anton I. Parfenov: **Developing an approach to summarizing the flows of security events to identify attacks in the network of telecommunication service providers[1)]**

2.3. Teodora Komazec, Slavko Gajin: **Analysis of flow-based anomaly detection using Shannon's entropy**

2.4. Đorđe D. Jovanović, Pavle V. Vuletić: **Analysis and Characterization of IoT Malware Command and Control Communication**

2.5. Omayma Belkadi, Yassin Laaziz, Alexandru Vulpe, Simona Halunga: **An Integration of OpenDaylight and OpenNebula for Cloud Management Improvement using SDN**

2.6. Irena Šeremet, Suada Hadžović, Saša Mrdović, Samir Čaušević: **SDN as a Tool for Energy Saving[1)]**

[1)]Paper will be presented remotely in current section

ТМ 2 - Уторак, 26.11.2019. године у 17:00 - сала 2/0

TN 2 - Tuesday, 26.11.2019, 17:00 – Hall 2/0

Председавајући: МЛАДЕН КОПРИВИЦА

Chairperson: MLADEN KOPRIVICA

2.7. Rajko Lucar, Dragan Narancic, Milivoj Bozic, Istvan Papp: **Comparative analysis of real-time protocols in IoT**

2.8. Jurgen Troci, Silvia Krug, Tino Hutschenreuther: **Applying Event-Based Sending Intervals to Enable Low Energy OPC-UA on Sensor Nodes**

2.9. Ufuk Altun, Saliha Büyükçorak, Güneş Karabulut Kurt: **A Testbed Implementation of Localization in Wireless Heterogeneous Networks[1)]**

2.10. Rekha M. Das, Sree Lekshmi S., Seshaiah Ponnekanti, Milan Paunovic: **Key Enablers to Deliver Latency-as-a-Service in 5G Networks**

2.11. Danil Y. Polukarov, Aleksandr P. Bogdan: **BANG: The Barabashi-Albert Network Generator as a modeling automation tool**

2.12. V. Oujezsky, T. Horvath: **Aequor Tracer – Network Analysis Application**

2.13. N. Gozuacik, F. Gurcan, B. Gunes: **Processor Transformation for Integrated VoIP Soft-Switches**

[1)]Paper will be presented remotely in current section

ТМ 3 - Среда, 27.11.2019. године у 8:30 - сала 2/0

TN 3 - Wednesday, 27.11.2019, 8:30 – Hall 2/0

Communication Networks - 2

Председавајући: МАРИЈА АНТИЋ

Chairperson: MARIJA ANTIĆ

2.14. Iva M. Salom, Anka V. Kabović, Milenko M. Kabović, Jovanka J. Gajica, Vladimir V. Čelebić: **Implementation on NTP Protocol in an Isolated Corporate Network**

2.15. Nermin Goran, Alen Begović, Namir Škaljo: **Comparing simulation model for objective QoE video evaluation with real IPTV test scenario during appearance of packet losses[1)]**

2.16. S. Tomovic, I. Radusinovic: **A new prediction based technique for Quality of Service aware Traffic Engineering**

2.17. Michal Morawski, Przemyslaw Ignaciuk: **Influence of Congestion Control Algorithms on Head-of-Line Blocking in MPTCP-based Communication**

2.18. Slobodan Miletić, Borislav Đorđević, Siniša Ranđić, Aleksandar Vasić: **Uticaj primene hardverskih RAID rešenja na distribuciju podataka u taktičkoj integrisanoj telekomunikacionoj i računarskoj mreži**

2.19. Zvezdan Stojanović, Elvir Čajić: **Primjena rješenja telegrafske jednačine za prenos signala telekomunikacionim vodom i vizualizacija u softverskom okruženju Matlab**

[1)] *Paper will be presented remotely in current section*

СЕКЦИЈА 3: РАДИО-КОМУНИКАЦИЈЕ (РК)
RADIO COMMUNICATIONS (RC)

РК 1 - Уторак, 26.11.2019. године у 14:30 – сала 5/1
RC 1 - Tuesday, 26.11.2019, 14:30 – Hall 5/1

Председавајући: ГОРАН МАРКОВИЋ и ЕНИС КОЧАН

Chairperson: GORAN MARKOVIĆ and ENIS KOČAN

3.1. Yeon-Ju Song, Seong-Jin Lim, Su-Kil Lee, Jae-Seon Jang: **Adaptive Digital Beamforming for Uplink Coverage Enhancement in 5G NR System**

3.2. Nina Šepić, Enis Kočan, Zoran Veljović, Millica Pejanović-Djurišić: **Assessment of novel solutions for throughput enhancement in IEEE 802.11ax networks**

3.3. Volkan Ozduran: **Inverse Successive Interference Cancellation For Non-Orthogonal Multiple Access**

3.4. Meftah Mehdawi, N. Riley, A. Fanan, O. Bentaher: **Proposed System Model for Wideband Cooperative Spectrum Sensing with Multi-Bit Hard Decision using Two-Stage Adaptive Sensing**

3.5. Yunfeng Li, Yonghui Huang, Ming Shen: **Modeling and Linearization of Active Phased Arrays with Non-uniform Power Distribution**

3.6. V. Djaja-Josko: **New synchronization method for UWB TDOA based localization system utilizing two reference nodes**

3.7. Marcin Kolakowski, Bartosz Blachucki: **Monitoring Wandering Behavior of Persons Suffering from Dementia Using BLE Based Localization System[2)]**

[2)] *Paper will be presented in section Remote Presentations – Slot 1*

РК 2 – Уторак, 26.11.2019.године у 17:00 - сала 5/1
RC 2 - Tuesday, 26.11.2019, 17:00 – Hall 5/1

Председавајући: МИРЈАНА СИМИЋ ПЕЈОВИЋ и МАРИЈА МАЛНАР

Chairperson: MIRJANA SIMIĆ PEJOVIĆ and MARIJA MALNAR

3.8. Suad Suljović, Dejan Milić: **Performance of Relay Signal Transmission by AF Technique Influenced by k-μ Fading *(Invited paper)***

3.9. Aleksandar V. Lebl, Mladen Đ. Mileusnić, Branislav R. Pavić, Verica B. Marinković-Nedelicki, Predrag M. Petrović: **Programmable Generator of Pseudo-White Noise for Jamming Applications**

3.10. Jelena Mladenović, Nataša Nešković, Aleksandar Nešković: **Izbor optimalne kombinacije ulaznih parametara modela predikcije nivoa električnog polja**

3.11. Marko Pajic, Mirko Simic, Radica Todorovic, Miroslav Peric, Mladen Veinovic: **TETRA Based Secure Voice Communication Solution in Non-Developed Regions**

3.12. Radana Gavrić, Dijana Ilišević, Nataša Banović Ćurguz, Đurađ Budimir: **Poređenje osnovnih karakteristika 4G/LTE i 5G NR tehnologije**

3.13. Selena Vukotić, Đorđe Babić, Desimir Vučić: **Softverska implementacija i analiza Nu-FBMC**

СЕКЦИЈА 4: СИСТЕМИ ПРЕНОСА СИГНАЛА (СПС)
COMMUNICATIONS SYSTEMS (CS)

СПС 1 - Уторак, 26.11.2019. године у 14:30 - сала 1а/0

CS 1 - Tuesday, 26.11.2019, 14:30 – Hall 1a/0

Communications Systems I

Председавајући: ДЕЈАН ДРАЈИЋ и ДЕЈАН МИЛИЋ

Chairpersons: DEJAN DRAJIĆ and DEJAN MILIĆ

4.1. Igor Miladinovic, Sigrid Schefer-Wenzl, Heimo Hirner: **IoT Architecture for Smart Cities Leveraging Machine Learning and SDN**

4.2. J. C. Garcia-Ortiz, D. Todoli-Ferrandis, J. Vera-Pérez, S. Santonja-Climent, V. Sempere-Payá: **Design of a micro-service based Data Pool for device integration to speed up digitalization**

4.3. Nadezda Yakusheva, Andrey Proletarsky, Michael Basarab: **State of the art and trends of Vehicle Communication: Overview**

4.4. Nadezda Yakusheva, Andrey Proletarsky, Michael Basarab: **Implemented Vehicular Communication Systems: Overview and Comparative Analysis**

4.5. Branka Stojanović, Katharina Hofer-Schmitz: **Formal Methods for Connected Vehicle Protocols**

4.6. Mohammad Baqer, Axel Krings: **Reliability of VANET Bicycle Safety Applications in Malicious Environments[2)]**

4.7. Buğra Kepçeoğlu, Azhar Murzaeva, Sercan Demirci: **Performing energy consuming attacks on IoT devices**

4.8. Ezaz Mohammed AL-Dahasi, Nazar Abbas Saqib: **Attack tree Model for Potential Attacks Against the SCADA System[2)]**

4.9. Akpojoto Siemuri, Tobias Glocker, Mike Mekkanen, Kimmo Kauhaniemi, Timo Mantere, Jonatan Rösgren, Jari Kuusisto, Mohammed Elmusrati: **Design and Implementation of a Wireless Automation Module for Diesel Engines**

[2)] *Paper will be presented in section Remote Presentations – Slot 1*

СПС 2 - Уторак, 26.11.2019. године у 17:00 - сала 1а/0
CS 2 - Tuesday, 26.11.2019, 17:00 – Hall 1a/0

Communications Systems II

Председавајући: НЕНАД МИЛОШЕВИЋ и ЗОРАН ЧИЧА

Chairpersons: NENAD MILOŠEVIĆ and ZORAN ČIČA

4.10. Okan Ertürk, Kutay Bölat, A. Doruk Başkan, Ibrahim Altunbaş: **A Media-Based Modulation Communication System Implementation Using Universal Software Radio Peripheral**

4.11. Srđan Popić, Bojan Majstorović, Maksim Vuleta, Đorđe Sarić, Branislav M. Todorović: **Efficient Usage of Resources in SDN by Modifying YANG Modules in Linux-based Embedded Systems**

4.12. Srđan Popić, Tijana Krnjajić, Sretenka Došlić, Branislav M. Todorović: **Implementation of NETCONF Client in C++ Programming Language for Software Defined Networks**

4.13. Igor A. Tomić, Djordje Lukić, Milutin Davidović, Dejan D. Drajić, Predrag Ivaniš: **Statistical Analysis of CQI Reporting and MIMO Utilization for Downlink Scheduling in Live LTE Mobile Network**

4.14. Jelena Stanulovic, Nathalie Mitton, Ivan Mezei: **Robot Task Allocation based on Greedy-Face-Greedy Algorithm**

4.15. Janez Bartol, Timotej Kodek, Andrej Souvent, Fabio Oliveira, Eric Lambert, Nejc Petrovič, Nermin Suljanović: **Utilization of ECCo SP for secured and reliable information exchange between system operators**

4.16. Martin Hedegaard Nielsen, Mads Helge Jespersen, Ming Shen: **Remote Diagnosis of Fault Element in Active Phased Arrays using Deep Neural Network**

4.17. Valery Kh. Bagmanov, Albert Kh. Sultanov, Azat R. Gizatulin, Ivan K. Meshkov, Ilya A. Kuk, Elizaveta P. Grakhova, Guzel I. Abdrakhmanova, Irina L. Vinogradova: **The vortex beams conversion from the optical range into the radio domain based on the nonlinear generation of the difference frequency**[2)]

[2)] *Paper will be presented in section Remote Presentations – Slot 1*

СПС 3 - Среда, 27.11.2019. године у 8:30 - сала 1а/0
CS 3 - Wednesday, 27.11.2019, 8:30 – Hall 1a/0

Communications Systems III

Председавајући: ГОРАН Т. ЂОРЂЕВИЋ и ВЕСНА БЛАГОЈЕВИЋ

Chairpersons: GORAN T. ĐORĐEVIĆ and VESNA BLAGOJEVIĆ

4.18. Goran T. Djordjevic, Nenad Milosevic, Predrag Ivanis: **Performance Analysis of DDPSK Receiver for Applications in Wireless IoT systems**

4.19. Srđan Brkic, Predrag Ivaniš: **Analysis and Design of LDPC Codes for FTN Signaling with Finite Number of Turbo Iterations**

4.20. François Le Neindre, Dominique Dallet, Guillaume Ferré, Emilie Boulanger, Frankie Letellier: **An Enhanced Random Error CRC Correction for ADS-B Squitters Receivers**

4.21. Natasha Ilievska: **Towards the Fixed Length Redundancy Code**

4.22. Nikola Latinovic, Hazhar Abid Mustafa Al-Atrooshi, Tomislav Unkasevic, Miroslav Peric, Mladen Veinovic: **Bulk Mode Encryption Devices Modification for Usage of Quantum Key Distribution**

4.23. Tonny Ssettumba, Ryan Kasamba, Richard Mutaawe, Jonathan Serugunda: **PHY Security Improvement of Wireless Sensor Networks in Presence of and Untrusted User**[2)]

4.24. Tomislav B. Unkašević, Zoran Đ. Banjac, Milan Milosavljević, Predrag Milosav, Hazhar Abid Mustafa Al-Atrooshi: **Generički model pseudoslučajnog generatora baziran na permutacijama**

4.25. Miladin Sandić, Bogdan Pavković, Nikola Teslić: **Procjena izvodljivosti primjene topologije tipa magistrala u TTEthernet mrežama**

4.26. Milan Paripović: **Energetska efikasnost je trajna orjentacija Telekoma – praktično iskustvo**

[2)] *Paper will be presented in section Remote Presentations – Slot 1*

СЕКЦИЈА 5: ОБРАДА СИГНАЛА (ОС)
SIGNAL PROCESSING (SP)

ОС 1 - Уторак, 26.11.2019. године у 14:30 - сала 6/1
SP 1 - Tuesday, 26.11.2019, 14:30 – Hall 6/1

Председавајући: МИЉКО ЕРИЋ

Chairpersons: MILJKO ERIĆ

5.1. Aleksandar V. Marković, Zoran H. Perić, Stefan R. Panić: **An Overview of Novel Methods for ASEP Performance Evaluation Based on Q-Function Approximation *(Invited paper)***

5.2. Ljubiša Stanković, MIloš Daković, Miloš Brajović, Danilo Mandić: **A *p*-Laplacian Inspired Method for Graph Cut**

5.3. Miloš Brajović, Srdjan Stanković, Irena Orović, Miloš Daković, Ljubiša Stanković: **Sparsity-Driven Impulsive Noise Removal: A Discrete Hermite Transform Case Study**

5.4. Isidora Stanković, Miloš Brajović, Miloš Daković, Cornel Ioana, Ljubiša Stanković: **On the Quantization and the Probability of Misdetection in Compressive Sensing**

5.5. Miloš Daković, Milan Ponjavić, Isidora Stanković, Jonatan Lerga, Cornel Ioana: **Time-Frequency Analysis of Ionospheric Whistler Signals**

5.6. Nurbanu Güzey, H. Mehmet Güzey: **Consensus-based Localization by Using Array of Antennas on a Fixed-Wing UAV**

ОС 2 - Уторак, 26.11.2019. године у 17:00 - сала 6/1
SP 2 - Tuesday, 26.11.2019, 17:00 – Hall 6/1

Председавајући: ВЛАДО ДЕЛИЋ

Chairpersons: VLADO DELIĆ

5.7. Siniša Suzić, Tijana Nosek, Milan Sečujski, Darko Pekar, Vlado Delić: **DNN Based Expressive Text-to-Speech with Limited Training Data *(Invited paper)***

5.8. Stefan S. Tomić, Zoran H. Perić, Jelena R. Nikolić: **Diferencijalno kodovanje govornog signala visokog kvaliteta zasnovano na adaptaciji unazad *(Invited paper)***

5.9. Tijana Nosek, Siniša Suzić, Boris Papić, Nikša Jakovljević: **Synthesized Speech Detection Based on Spectrogram and Convolutional Neural Networks**

5.10. Branislav Popović, Edvin Pakoci, Darko Pekar: **Transfer Learning in Automatic Speech Recognition for Serbian**

5.11. Nikša Jakovljević, Nina Maljković, Dragiša Mišković, Petar Knežević, Vlado Delić: **A Broiler Stress Detection System Based on Audio Signal Processing**

ОС 3 - Среда, 27.11.2019. године у 8:30 – сала 6/1

SP 3 - Wednesday, 27.11.2019, 8:30 – Hall 6/1

Председавајући: АНА ГАВРОВСКА

Chairpersons: ANA GAVROVSKA

5.12. Ivan Aleksi, Filip Sušac, Tomislav Matić: **Features Extraction and Texture Defect Detection of Sawn Wooden Board Images**

5.13. Tijana Vuković, Ranko Petrović, Miloš Pavlović, Srđan Stanković: **Thermal Image Degradation Influence on R-CNN Face Detection Performance**

5.14. Cosmin Dănişor, Antionio Pauciullo, Gianfranco Fornaro, Mădălin Frunzete: **Analysis of the Statistical Correlation in the Context of Multi-Look SAR Tomography**

5.15. Aleksandra Zec, Vladimir Ostojić, Vladimir Petrović: **Objective Assessment of Noise Presence in Diagnostic Radiographic Images**

5.16. Ilke Kurt, Sezer Ulukaya, Oğuzhan Erdem: **Classification of Parkinson's Disease Using Dynamic Time Warping**

5.17. Marian-Emanuel Ionaşcu, Iasmina Gruicin, Marius Marcu: **Variance Analysis of Signals from Four Electrode Electrochemical Sensors**

5.18. Mirjana M. Filipovic, Ljubinko B. Kevac, Ana M. Djuric: **Geometry of artificial muscle driven by one actuator**

ОС 4 - Среда, 27.11.2019. године у 11:00 – сала 6/1

SP 4 - Wednesday, 27.11.2019, 11:00 – Hall 6/1

Председавајући: БУДИМИР ЛУТОВАЦ

Chairpersons: BUDIMIR LUTOVAC

5.19. Nikolay V. Butyrlagin, Nikolay I Chernov, Nikolay N. Prokopenko, Vladislav Ya.Yugay: **Logical Synthesis and Circuitry of Digital Current Circuits: Polynomial Approach**

5.20. Daria Yu. Denisenko, Nikolay N. Prokopenko, Nikolay V. Butyrlagin, Alexey E. Titov: **Multi-Functional Active RC-Filter (BPF, LPF, HPF, RF) for Designing Specialized Gate-Array Master Chip and Frequency Selection Devices**

5.21. Milan S. Stojanović, Đorđe P. Glavonjić, Ivan M. Milosavljević, Dušan P. Krčum, Veljo R. Mihajlović: **Impact of Phase Noise on Frequency Estimation of FM Signals**

5.22. Tomas Eglynas, Mindaugas Jusis, Sergej Jakovlev, Audrius Senulis, Pavol Partila, Saulius Gudas: **Research of Quay Crane Control Algorithm with Embedded Sway Control Sub-routine**

5.23. Nenad Pekez, Radovan Čelić, Robert Pečkai-Kovač, Jelena Kovačević: **Measuring Audio Processing Latency for Lip-Sync purposes in DSP-based Home Theatre Systems**

5.24. Jelena Boroja, Jelena Kovačević, Sanja Čordašić: **3D Audio Post-Processing Module on DSP Platform**

5.25. Dusan M. Nedeljkovic, Zivana B. Jakovljevic, Zoran Dj. Miljkovic, Miroslav Pajic: **Detection of cyber-attacks in electro-pneumatic positioning system with distributed control**

СЕКЦИЈА 6: ПРИМЕЊЕНА ЕЛЕКТРОМАГНЕТИКА (ПЕМ)
APPLIED ELECTROMAGNETICS (AEM)

ПЕМ 1 - Среда, 27.11.2019. године у 8:30 – сала 4/1
AEM 1 - Wednesday, 27.11.2019, 8:30 – Hall 4/1

Председавајући: WEN-YAN и БРАНКО КОЛУНЏИЈА

Chairpersons:WEN-YAN and BRANKO KOLUNDŽIJA

6.1. Wen-Yan Yin: **Multiphysics Modeling, Simulation and Design of Miniaturized RF Devices & Circuits for Wireless Communication Application *(Invited talk)***

6.2. Naser Ojaroudi Parchin, Raed A. Abd-Alhameed, Yunfeng Li, Martin Hedegaard Nielsen, Ming Shen: **Enhanced-Gain Dual-Polarized Slot Antenna with a Frequency Selective Surface**

6.3. E. Shabashov, S. Shabunin, B. Mrdakovic: **Modeling and Analysis of Spiral Antenna Properties for Research the Brain Radiation in the Microwave Range**

6.4. Marija Milijić, Branka Jokanović: **High-gain Slot Antenna Arrays for 5G and Radar Application**

6.5. Naser Ojaroudi Parchin, Raed A. Abd-Alhameed, Yunfeng Li, Ming Shen: **Reconfigurable Phased Array 5G Smartphone Antenna for Cognitive Cellular Networks**

6.6. Viktor A. Semenov, Denis A. Letavin: **Development of a linear antenna array on a flexible substrate**

6.7. Dušan A. Nešić: **Short-Circuited Edge Stub in Wide Bandpass Filters Using Copper Tape on Paper Substrate**

6.8. Denis A. Letavin, Yury E. Mitelman, Sergey N. Shabunin, Nikolay S. Knyazev: **Compact directional coupler for centimeter and millimeter wavelength ranges**

6.9. Naser Ojaroudi Parchin, Raed A. Abd-Alhameed, Yunfeng Li, Martin Hedegaard Nielsen, Ming Shen: **High-Performance Yagi-Uda Antenna Array for 28 GHz Mobile Communications**

ПЕМ 2 - Среда, 27.11.2019. године у 11:00 - сала 4/1
AEM 2 - Wednesday, 27.11.2019, 11:00 – Hall 4/1

Председавајући: БРАНКА ЈОКАНОВИЋ и SERGEY SHABUNIN

Chairpersons: BRANKA JOKANOVIĆ and SERGEY SHABUNIN

6.10. S. Shabunin: **Green's Functions in Electrodynamics *(Invited paper)***

6.11. I. Kanbaz, U. Yesilyurt, S. Kuzu, E. Aksoy: **Pattern Synthesis in Time Modulated Arrays via Offsetted Time Sequences**

6.12. Vasily Yu. Kozhevnikov, Andrey V. Kozyrev, Aleksandr O. Kokovin, Aleksey Sitnikov: **Electrodynamic Nature of the Convectionless Atmospheric Plasma Jets**

6.13. Sergei A. Zuev, Aleksey S. Zuev, Vladimir V. Starostenko, Evgeniy V. Grigoriev, Alim S. Mazinov, Evgeniy P. Taran, Ibraim Sh. Fitaev, Vulf B. Orlenson: **Breakdown features in functional devices of telecommunication systems**

6.14. U. Yesilyurt, I. Kanbaz, S. Kuzu, E. Aksoy: **Harmonic Beam Steering through Dual-Phase Variable Pulse Amplitude Switching Strategy in Time Modulated Linear Arrays**

6.15. S. Shabunin: **Antenna Array for Radiosonde Tracking Radar**

6.16. Luka Lazović, Branka Jokanović, Vesna Rubežić, Ana Jovanović: **Uniplanar Ultra-Wideband Cardioid Slot Antenna for Energy Harvesting Application**

6.17. Slobodan Bjelić, Bojan Prlinčević, Nenad Marković, Nikola Milenković: **Comparison of schemes with distributed parameters and П scheme of circuits that are closed by nonlinear inductance**

6.18. Marko M. Milivojčević, Nenad D. Tolić, Mijat I. Štimac: **Mogućnost upotrebe mikrotrakastih peč antena umesto dipol antena u bežičnim senzorskim mrežama na 2.4GHz**

СЕКЦИЈА 7: ПРИМЕЊЕНА ЕЛЕКТРОНИКА (ПЕЛ)
APPLIED ELECTRONICS (AEL)

ПЕЛ 1 - Среда, 27.11.2019. године у 8:30 - сала 3/1

AEL 1 - Wednesday, 27.11.2019, 8:30 – Hall 3/1

Elektronski sistemi/Electronic Systems

Председавајући: ЗЛАТКО БУНДАЛО и ВЛАДИМИР РАЈОВИЋ

Chairperson: ZLATKO BUNDALO and VLADIMIR RAJOVIĆ

7.1. Mirko Sajić, Dušanka Bundalo, Goran Kuzmić, Zlatko Bundalo, Dejan Lalić: **Automation of teller/counter services in smart cities concept using universal digital devices**

7.2. Roland Szabo: **Resource Utilization Comparison Between Plain FPGA and SoC Combined with FPGA for Image Processing Applications Used by Robotic Arms**

7.3. Rastislav Struharik, Vuk Vranjkovic: **Stick Buffer Cache v2: Improved Input Feature Map Cache for Reducing off-chip Memory Traffic in CNN Accelerators**

7.4. Iordan I. Stoev, Snezhinka L. Zaharieva, Valentin A. Mutkov: **Evaluation of Gross Errors in Measured Temperature with an Electronic System for Management of Residential Energy Systems**

7.5. Iordan I. Stoev, Snezhinka L. Zaharieva, Adriana N. Borodzhieva: **An Approach for Assessment of the Synchronization Between Digital Temperature Sensors**

7.6. Wojciech Wojtkowski, Andrzej Zankiewicz: **Automotive diagnostic system with OBD connectivity**

7.7. Jan Zich, Vjaceslav Georgiev, Michael Holik, Vladimir Pavlicek, Ondrej Vavroch: **Multichannel Coincidence Circuit with Settable Threshold Level for ToF AFP Detector**

ПЕЛ 2 - Среда, 27.11.2019. године у 11:00 - сала 3/1
AEL 2 - Wednesday, 27.11.2019, 11:00 – Hall 3/1

Elektronska kola/Electronic Circuits

Председавајући: РАДИВОЈЕ ЂУРИЋ и ДУШАН ГРУЈИЋ

Chairpersons: RADIVOJE ĐURIĆ and DUŠAN GRUJIĆ

7.8. Nikolay N. Prokopenko, Petr S. Budyakov, Ilya V. Pakhomov, Alexey E. Titov: **AB Class CJFET Dual-Input Stage for Low Temperature Analog ICs**[1)]

7.9. Panagiotis Gkoutis, Vasilis Kolios, Grigorios Kalivas: **A Reconfigurable 2.4GHz Power Amplifier for Polar Transmitter in 28nm FD-SOI CMOS technology**

7.10. Maxim V. Liashov, Ekaterina P. Nikitina, Yuriy I. Ivanov, Alexey A. Zhuk, Ilya V. Pakhomov: **Parametric Optimization of the CJFET Buffer Amplifier with Low Offset Voltage within the Range of Low Temperature**[1)]

7.11. Alperen Tunç, Osman Ceylan, H. Bülent Yağci, Selçuk Paker: **SiGe HBT Low Noise Amplifier Module for sub-six 5G Receivers**

7.12. Lida Kouhalvandi, Osman Ceylan, Serdar Ozoguz: **Automated RF Power Amplifier Optimization and Design: From Lumped Elements to Distributed Elements**

7.13. Osman Ceylan, H. Bulent Yagci, Selcuk Paker: **First Order Single Parameter Phase and Amplitude Sensitivity Analysis of GaN HEMT**

[1)]*Paper will be presented remotely in current section*

СЕКЦИЈА 8: МУЛТИМЕДИЈА (ММ)
MULTIMEDIA (MM)

ММ 1 - Среда, 27.11.2019. године у 11:00 - сала 9/0 лево
MM 1 - Wednesday, 27.11.2019, 11:00 – Hall 9/0 left

Obrada i karakterizacija multimedijalnog sadržaja

Processing and characterizing of multimedial contents

Председавајући: АНА ГАВРОВСКА и ЗОРАН ГАЈИЋ

Chairpersons: ANA GAVROVSKA and ZORAN GAJIĆ

8.1. Aleksandra Pavlović, Nataša Milosavljević, Ana Gavrovska, Irini Reljin: **Nova metoda za detekciju copy move promena na slikama *(Invited presentation)***

8.2. Milan Pavlović, Irini Reljin, Miomir Mijić: **Room sound field characterization and clustering using global multifractal parameters (Invited paper)**

8.3. Milica Arsenović, Snježana Rimac-Drlje: **QoE and Video Quality Evaluation for HTTP Based Adaptive Streaming**

8.4. Miljan Đorđević, Milan Milivojević, Ana Gavrovska: **DeepFake Video Analysis using SIFT Features**

8.5. Milan S. Milivojević, Ana Gavrovska, Irini Reljin, Branimir Reljin: **Using Optical IoT Sensing for Detrended Fluctuation Analysis of Skin Blood Pulsation during Visual Stimulation Task**

ММ 2 - Среда, 27.11.2019. године у 08:30 - сала 9/0 лево
MM 2 - Wednesday, 27.11.2019, 08:30 – Hall 9/0 left

Kodovanje i prenos multimedijalnih signala

Coding and transmitting of multimedial signals

Председавајући: МИЛАН БЈЕЛИЦА и МИЛОРАД ПАСКАШ

Chairpersons: MILAN BJELICA and MILORAD PASKAŠ

8.6. Boriša Ž. Jovanović, Slavko R. Gajin: **Kriptografska sinhronizacija u algoritmima selektivnog šifrovanja HEVC video toka *(Invited presentation)***

8.7. Jovana P. Gojanović: **Organic Semiconductors in Optical Communications *(Invited paper)***

8.8. Karina S. Absalyamova, Rustam Kh. Latypov, Evgeni L. Stolov: **Ternary Code of Melody and Reliable Audio Watermarking**

8.9. Miroslav Uhrina, Juraj Bienik, Lukas Sevcik, Miroslav Voznak: **Video Quality Assessment: Relationship between objective and subjective methods[1)]**

8.10. Marian Ceaparu, Ştefan-Adrian Toma, Alexandru-Ionuţ Frunză: **Character Level Keyword Spotting in VoIP Networks**

8.11. Tatiana N. Bakhvalova, Mikhail E. Belkin, Morteza Kamalian-Kopae, Sergei K. Turitsyn: **Correcting the Chromatic Dispersion of a Fronthaul Fiber Link in Millimeter-Wave Radio-over-Fiber Networks[1)]**

[1)]Paper will be presented remotely in current section

СЕКЦИЈА 9: СОФТВЕРСКИ АЛАТИ И АПЛИКАЦИЈЕ (САА)
SOFTWARE TOOLS AND APPLICATIONS (STA)

САА 1 - Уторак, 26.11.2019. године у 14:30– сала 1б/0
STA 1 - Tuesday, 26.11.2019, 14:30 – Hall1б/0

Председавајући:СИНИША РАНЂИЋ и НЕНАД КОРОЛИЈА

Chairperson:SINIŠA RANĐIĆ and NENAD KOROLIJA

9.1. Aleksandra Jamina, Bogdan Pavković, Branislav M. Todorović, Miloš Subotić: **Jedno rješenje pripreme okruženja za automatsko testiranje elektronske upravljačke jedinice u automobilu**

9.2. Nebojša Kakuća, Duško Davidović, Branislav Todorović, Velibor Ilić: **Selektivno ažuriranje programske podrške u automobilu**

9.3. Filip Jašić, Dejan Bokan, Zoran Marčeta: **Jedno rešenje alata za analizu automobilskih magistrala korišćenjem osciloskopa**

9.4. Ognjen Novaković, Veljko Tešić, Velibor Ilić, Bogdan Pavković: **Automatsko generisanje testova za komunikaciju između elektronskih kontrolnih jedinica u automobilskim sistemima**

9.5. Tomislav Kovač: **Translating CIM model to bus-branch model**

9.6. Chenfang Lu, Ana Djuric, Wei Wang, Mirjana M. Filipovic: **Singularity Analysises for 3-DOF Reconfigurable Robots**

9.7. Ana Djuric, R. Jill Urbanic, Chenfang Lu, Mirjana Filipovic, Ljubinko Kevac: **Evaluating the Functional Work Window using a Unified Robot Model**

9.8. P. Pavlov, P. Sosnin: **Using Skeleton Models of Parts and Assembly Units of Aircraft Pipeline for Adjustment of Coordinate System**

САА 2 - Уторак, 26.11.2019. године у 17:00– сала 1b/0

STA 2 - Tuesday, 26.11.2019, 17:00 – Hall 1b/0

Председавајући: ДЕЈАН ДУНЂЕРСКИ и ЖАРКО СТАНИСАВЉЕВИЋ

Chairperson:DEJAN DUNĐERSKI and ŽARKO STANISAVLJEVIĆ

9.9. Marko Batić, Sanja Vraneš: **Software system for multi-criteria planning and management of hybrid microgrids *(Invited presentation)***

9.10. Robert Šimon, Branimir Kovačević, Nives Kaprocki: **Jedno rešenje primene statičke analize koda u razvoju softvera za automobilsku industriju**

9.11. Milan Miscević, Drazen Brdjanin: **An Approach to Automatic Layout of Eclipse Papyrus Class Diagrams**

9.12. Dimitrije Stojanović, Momčilo Krunić, Nenad Četić, Nemanja Lukić: **Source code generators for ADAS feature deployment in context of ROS and adaptive AUTOSAR applications**

9.13. Mihajlo Nikolić, Momčilo Krunić, Milan Bjelica, Nenad Četić: **Utilization of pattern generators in Adaptive AUTOSAR Platform**

9.14. Thu Thuy Trieu, Dana Petcu: **Building a Prototype Netcloudbook for User Activities-centered Social Network based on Booked Open-source and Docker Technology**[2)]

9.15. Toshe Petrovski, Marjan Gusev: **Multitenancy and scalability solution – a case study**

9.16. Roland Szabo: **The Development Process of a Tooth Brushing App on Android Using Movement Direction Detection with OpenCV**

[2)] *Paper will be presented in section Remote Presentations – Slot 1*

САА 3 - Среда, 27.11.2019. године у 8:30– сала 1б/0

STA 3 - Wednesday, 27.11.2019, 8:30 –Hall 1б/0

Председавајући: БРАНКО МАЛЕШЕВИЋ и МАРКО МИШИЋ

Chairpersons: BRANKO MALEŠEVIĆ and MARKO MIŠIĆ

9.17. Jovan Stojković, Marko Mišić, Jelica Protić: **Collaboration network analysis of scientific production at UB-SEE**

9.18. Bojan Banjac, Branko Malešević, Zorica Matić: **One application of Groebner's basis to detection of bounding volume spheres collision**

9.19. Branko Malešević, Bojan Banjac: **Automated Proving Mixed Trigonometric Polynomial Inequalities**

9.20. Stefan Branković, Aleksandar Marković, Danijela Simić, Aleksandar Rikalo: **Improving performance of sorting small arrays on MIPS CPUs using bitonic sort and SIMD instructions**

9.21. Teodor Malbašić, Branislav Kordić, Marko Kovačević, Živko Bojović: **Jedno rešenje izračunavanja pokrivenosti koda prilikom izvršavanja automatskih testova na elektronskoj upravljačkoj jedinici**

9.22. Ermira Idrizi, Sonja Filiposka, Vladimir Trajkovik: **The Discourse on Learning Styles in Online Education**
9.23. Heimo Hirner, Markus Lavicka, Sigrid Schefer-Wenzl, Igor Miladinović: **Agile Software Integration in Telecommunications – a Case Study**
9.24. Lozinskaya N. Ya.: **Method for Forecasting the Location of Oil Field Deposit**

САА 4 - Среда, 27.11.2019. године у11:00–сала 1б/0
STA 4 - Wednesday, 27.11.2019, 11:00 – Hall 1б/0

Председавајући: БОРИСЛАВ ЂОРЂЕВИЋ и МАРИЈА ПУНТ

Chairperson: BORISLAV ĐORĐEVIĆ and MARIJA PUNT

9.25. Marko Kojić, Borislav S. Đorđević, Valentina Timčenko, Svetlana Štrbac: **Storage performance analysis of iSCSI and Fibre Channel protocol**
9.26. Dejana T. Vojnak, Borislav S. Djordjevic, Valentina V. Timcenko, Svetlana M. Strbac: **Performance Comparison of the type-2 hypervisor VirtualBox and VMWare Workstation**
9.27. Dejana Radić, Aleksandar Čumić, Aleksandra Davidović, Nemanja Lukić: **Modelovanje i implementacija ekonomičnog sistema za regulaciju unutrašnje temperature vozila**
9.28. Luka Banduka, Marko Stanojlović, Miodrag Dinić, Petar Jovanović: **Unapređenje jezika P4 podrškom za ispis korisnički definisanih poruka u simulatoru mrežnih uređaja**
9.29. Aida Granulo, Anel Tanović: **Comparison of SCRUM and KANBAN in the Learning Management System Implementation Process**
9.30. Ilias Chalvatzis, Dimitrios A. Karras, Rallis C. Papademetriou: **Using NASL based Superscripts to measure System Security through Analyzing and Organizing attacks**
9.31. Stevan Stević, Momčilo Krunić, Marko Dragojević, Nives Kaprocki: **Development and validation of ADAS perception application in ROS environment integrated with CARLA simulator**
9.32. Irfan Prazina, Edina Kovač, Damir Pozderac, Zerina Ramić, Vensada Okanović, Emir Cogo:**Testing Web Page Layouts Using Galen Framework Tests Generated By The Mockup Tool**

САА 5 - Среда, 27.11.2019. године у 8:30– сала 5/1
STA 5 - Wednesday, 27.11.2019, 8:30 – Hall 5/1

Председавајући:МИРОСЛАВ ПОПОВИЋ и ЖИВОЈИН ШУШТРАН

Chairperson:MIROSLAV POPOVIĆ and ŽIVOJIN ŠUŠTRAN

9.33. Zoran B. Babović: **Semantic Internet of Things Platforms – Examples of Two Different Approaches for Cloud Environment *(Invited paper)***
9.34. Marko Popović, Miroslav Popović, Branislav Kordić, Ilija Bašičević: **A Solution of Python Distributed STM Based on Data Replication**
9.35. Dragoljub Gajić, Radovan Marković, Ilija Bašičević, Dušan Živkov: **Integracija Google Game servisa sa TV aplikacijom na Android uređajima**
9.36. Soha Yousuf, Davor Svetinović: **Blockchain Trust and Decentralization in Supply Chain Management**
9.37. Nataša Živić, Esad Kadušić, Kerim Kadušić: **Directed Acyclic Graph as Tangle: an IoT Alternative to Blockchains**

9.38. Cankal Altun, Bulent Tavli: **Social Internet of Digital Twins via Distributed Ledger Technologies: Application of Predictive Maintenance**[2)]

9.39. George Papageorgiou, Anastasia Ioannou, Alexander N. Ness, Athanasios Maimaris: **Developing a Smart Pedestrian Network (SPN) System - Smartphone App**

[2)] *Paper will be presented in section Remote Presentations – Slot 1*

САА 6 – Среда, 27.11.2019. године у 11:00– сала 5/1
STA 6 – Wednesday, 27.11.2019, 11:00 – Hall 5/1

Председавајући: ЗАХАРИЈЕ РАДИВОЈЕВИЋ и ДРАЖЕН ДРАШКОВИЋ

Chairperson: ZAHARIJE RADIVOJEVIĆ and DRAŽEN DRAŠKOVIĆ

9.40. Dražen Drašković: **Development of intelligent systems and application of gamification in artificial intelligence learning *(Invited presentation)***

9.41. Lazar Djordjevic, Nenad Petrovic, Milorad Tosic: **Ontology based approach to development of augmented reality applications**

9.42. Marko Krstić, Milan Čabarkapa, Aleksandar Jevremović: **Machine Learning Applications in Computer Emergency Response Team Operations**

9.43. Nikola Pejić, Miloš Cvetanović, Zaharije Radivojević: **Estimating similarity between differently compiled procedures using neural networks**

9.44. Zoran Ereiz: **Predicting Default Loans Using Machine Learning**

9.45. Nenad Petrović, Djordje Kocić: **Framework for efficient energy trading in smart grids**

9.46. Arturs Lavrenovs, Gabor Visky: **Exploring features of HTTP responses for the classification of devices on the Internet**

СЕКЦИЈА 10: МОБИЛНЕ И БЕЖИЧНЕ МРЕЖЕ (МБМ)
MOBILE AND WIRELESS NETWORKS (MWN)

МБМ 1 – Уторак, 26.11.2019. године у 17:00 - сала 3/1
MWN 1 – Tuesday , 26.11.2019, 17:00 – Hall 3/1

Председавајући: МАРИЈА МАЛНАР

Chairpersons: MARIJA MALNAR

10.1. S. Panev, P. Latkoski: **Latency Evaluation and Modelling in Distributed SDN-based Mobile Networks**[1)]

10.2. Margarita V. Ushakova, Yuny A. Ushakov, Petr P. Polezhaev, Alexandr E. Shukhman: **Research of Energy-Saving Wireless Self-Organizing Multi-Protocol Network for Internet of Things**[1)]

10.3. Phaisal Lubega, Tonny Ssettumba, Hanifa Nabuuma, Jonathan Serugunda: **A Secure Energy Efficient Multi-User Selection Scheme for SWIPT Wireless IoT Networks in the Presence of Cooperative Jamming**[1)]

10.4. A. Filippou, Dimitrios A. Karras, I. Tsatrafyllis: **On Efficient Scheduling Schemes in Multiagent Wireless Sensor Networks Simulation Systems**

10.5. Nebojsa Bacanin, Timea Bezdan, Eva Tuba, Ivana Strumberger, Milan Tuba, Miodrag Zivkovic: **Task Scheduling in Cloud Computing Environment by Grey Wolf Optimizer**

10.6. Pavle D. Bugarcic, Marija Z. Malnar, Nenad J. Jevtic: **Modifications of AODV protocol for VANETs: performance analysis in NS-3 simulator**

10.7. Pierfracesco Raimondo, Francesco Noto, Nunzia Palmieri: **PARATA: A Routing Strategy in VANET for CO_2 Emissions Reduction**

10.8. Nunzia Palmieri, Francesco Noto, Abdon Serianni: **Multimedia Traffic Management in FANET under Human Mobility Scenarios**

[1)]Paper will be presented remotely in current section

МБМ 2 – Среда, 27.11.2019. године у 11:00 - сала 1а/0

MWN 2 – Wednesday , 27.11.2019, 11:00 – Hall 1a/0

Председавајући: ГОРАН МАРКОВИЋ

Chairpersons: GORAN MARKOVIĆ

10.9. Jovan Crnogorac, Jelena Kovač, Enis Kočan, Mališa Vučinić: **d-Argus: a Distributed IEEE 802.15.4. Sniffer**

10.10. Kristina Josifović, Stefan Boljević, Vukan Ninković, Natan Turčinović: **Simulating Massive IoT Environmental Monitoring Scenario using OMNeT++**

10.11. Zdenko Kljaić, Mihael Cipek, Tomislav Josip Mlinarić, Danijel Pavković, Davor Zorc: **Utilization of Track Condition Information from Remote Wireless Sensor Network in Railways – A Mountainous Rail Track Case Study**

10.12. Nikola Cmiljanic: **Application of Temperature RFID Sensors in the Food Cold Chain in Montenegro**

10.13. Andrej Jovanov, Jane Lameski, Biljana Risteska Stojkoska: **Implementation of Smart Home Solution based on Internet of Things**

10.14. Marjan Ralevski, Biljana Risteska Stojkoska: **IoT based system for detection of gas leakage and house fire in smart kitchen environments**

10.15. Nastasija Grujić, Sanja Brdar, Olivera Novović, Miro Govedarica, Vladimir Crnojević: **Evidence of urban segregation from mobile phone data: A case study of Novi Sad**

СЕКЦИЈА 11: СТУДЕНТСКА СЕКЦИЈА (С)
STUDENT PAPERS (S)

С1 - Уторак, 26.11.2019. године у 17:00 - сала 4/1

S1 - Tuesday, 26.11.2019, 17:00 – Hall 4/1

Председавајући: ЈЕЛЕНА ЋЕРТИЋ и МИЛКА ПОТРЕБИЋ

Chairpersons: JELENA ĆERTIĆ i MILKA POTREBIĆ

11.1. Aneta T. Kartali, Dejana V. Vuković: **Uticaj načina segementacije na prepoznavanje dužice**

11.2. Katarina Mladenović, Aleksandra Zec: **Detekcija Parkinsonove bolesti na osnovu dinamike crtanja**

11.3. Ana Ćupurdija: **Projektovanje podsklopova Doplerovog radara: mikrotalasnog mešača i Vilkinsonovog delitelja snage**

11.4. Miloš Krstanović: **Projektovanje mikrotalasnog detektora snage sa šotki diodom**

11.5. Igor Tomić: **Pregled tehnika koordinisane multipoint komunikacije**
11.6. Alen Kukić: **Pregled IMS bazirane VoWiFi tehnologije**
11.7. Janoš Bagi: **Jedno rešenje dostizanja funkcionalne bezbednosti I^2C rukovaoca**
11.8. Fidel Omusilibwa, Cynthia Thuo: **Internet of Things (IOT) Smart Prepaid Energy Meter**

ПРЕЗЕНТАЦИЈЕ „НА ДАЉИНУ“
REMOTE PRESENTATIONS

ПД1 - Уторак, 26.11.2019. године у 14:30 - сала 9/0 лево
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3.7. Marcin Kolakowski, Bartosz Blachucki: **Monitoring Wandering Behavior of Persons Suffering from Dementia Using BLE Based Localization System**
4.6. Mohammad Baqer, Axel Krings: **Reliability of VANET Bicycle Safety Applications in Malicious Environments**
4.8. Ezaz Mohammed AL-Dahasi, Nazar Abbas Saqib: **Attack tree Model for Potential Attacks Against the SCADA System**
4.17. Valery Kh. Bagmanov, Albert Kh. Sultanov, Azat R. Gizatulin, Ivan K. Meshkov, Ilya A. Kuk, Elizaveta P. Grakhova, Guzel I. Abdrakhmanova, Irina L. Vinogradova: **The vortex beams conversion from the optical range into the radio domain based on the nonlinear generation of the difference frequency**
4.23. Tonny Ssettumba, Ryan Kasamba, Richard Mutaawe, Jonathan Serugunda: **PHY Security Improvement of Wireless Sensor Networks in Presence of and Untrusted User**
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5.8. Stefan S. Tomić, Zoran H. Perić, Jelena R. Nikolić: **Diferencijalno kodovanje govornog signala visokog kvaliteta zasnovano na adaptaciji unazad *(Invited paper)***

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