

**XLIV Symposium on operational research**  
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**International Regional Symposium**

**SYM-OP-IS 2017**

Zlatibor, hotel „Palisad“  
25. – 28. september 2017. year

# **WORK PROGRAM**



**Editor:**

**Prof. Goran Ćirović PhD.**



## ORGANIZERS



University College of Professional Studies for Civil  
Engineering and Geodesy, Belgrade

Main Organizer SYM-OP-IS-a 2017



Society of Operational Researchers



Institute Mihajlo Pupin, Belgrade



Faculty of Transport and Traffic Engineering, Belgrade



Faculty of economics



Faculty of Mathematics



Ministry of Defence, Republic of Serbia



Economics Institute



Mathematical Institute SASA, Belgrade



Armed Force of Serbia



Faculty of Organizational Sciences, Belgrade



Faculty of mining and geology



University of Banja Luka

## TABELARY SHOWED EXHIBITION SCHEDULE

Monday 25. september 2017	
12:00 – 15:00	Registration and accommodation of participants
15:00 – 16:00	Conference room A Tara: Opening Ceremony
	- Welcome word - Addressing guests - Addressing the carrier of the charter
16:00 – 17:00	Welcome cocktail
17:00 – 20:00	Lectures by invitation

Tuesday 26. september 2017.				
<i>Work by sections</i>				
Conference room A - Tara	Conference room B - Drina	Conference room C - Tisa	Conference room D - Morava	Conference room E - Sava
18. Military Defense Applications	20. OR in Traffic, Transportation and Communication	13. Logistics Management	5. Finance and Banking	6. Geoinformation systems
<i>Pause 11<sup>30</sup> do 12<sup>00</sup></i>	9 <sup>00</sup> -11 <sup>30</sup>	9 <sup>00</sup> -11 <sup>00</sup>	2. Economic Models and Econometrics	9 <sup>00</sup> -11 <sup>00</sup>
9 <sup>00</sup> -14 <sup>00</sup>	<i>Pause 11<sup>30</sup>- 12<sup>00</sup></i>	<i>Pause 11.00 - 11.30</i>	9 <sup>00</sup> -11 <sup>30</sup>	<i>Pause 11<sup>00</sup>- 11<sup>30</sup></i>
	21. Simulation and Stochastic Model	9. Information Systems I Tehnologies	<i>Pause 11.30 - 12.00</i>	34. Business Analytics
	12 <sup>00</sup> -14 <sup>00</sup>	11 <sup>30</sup> -14 <sup>00</sup>	16. OR In Management	11 <sup>30</sup> – 13 <sup>00</sup>
			11 <sup>30</sup> – 12 <sup>00</sup>	26. Multicriteria Analysis and Optimization
				13 <sup>00</sup> – 14 <sup>00</sup>
15.00 – 19.00	Excursion - Stopica cave, Sirogojno, Gostilna Falls			

Wednesday 27. september 2017.

**Work by sections**

Conference room A - Tara	Conference room B - Drina	Conference room C - Tisa	Conference room D - Morava	Conference room E - Sava
27. Game Theory	10. Research and Development	1. OR In Environmental Management And Natural Resources Management	14. Mathematical Programming	7. OR in Civil Engineering
9 <sup>00</sup> -10 <sup>00</sup>	9 <sup>00</sup> -11 <sup>00</sup>	9 <sup>00</sup> -11 <sup>30</sup>	9 <sup>00</sup> -10 <sup>00</sup>	9 <sup>00</sup> -11 <sup>00</sup>
25. Reliability and Risk Management	<i>Pause</i> 11 <sup>00</sup> - 11 <sup>30</sup>	<i>Pause</i> 11 <sup>30</sup> - 12 <sup>00</sup>	30. Heuristics	<i>Pause</i> 11 <sup>00</sup> - 11 <sup>30</sup>
10 <sup>00</sup> -11 <sup>00</sup>	15. Soft Computing	19. OR in Mining, Geology and Energetics	10 <sup>00</sup> -11 <sup>30</sup>	7. Peri systems - optimization of the layout of the formwork
31. Data Science	11 <sup>30</sup> -13 <sup>30</sup>	12 <sup>00</sup> -12 <sup>30</sup>		11 <sup>30</sup> -12 <sup>30</sup>
11 <sup>00</sup> -11 <sup>30</sup>	3. Electronic business	12. Combinatorial Optimization		7. OR in Civil Engineering
<i>Pause</i> 11 <sup>30</sup> - 12 <sup>00</sup>	13 <sup>30</sup> -14 <sup>00</sup>	12 <sup>30</sup> -13 <sup>00</sup>		12 <sup>30</sup> -14 <sup>00</sup>
33. SOFT AND Behavioral OPERATIONAL RESEARCH		24. Production and Stock Management		
12 <sup>00</sup> -13 <sup>00</sup>		13 <sup>00</sup> -14 <sup>00</sup>		
29. Performance Analysis				
13 <sup>00</sup> -14 <sup>00</sup>				
20:30	Gala Dinner (Closing Ceremony)			

Thursday 28.september 2017.

<i>Work by sections</i>	
Conference room B - Drina	Conference room C - Morava
28. Analytics and Optimization in Public Sector	32. QUANTITATIVE MODELS IN FINANCE
9 <sup>00</sup> -11 <sup>00</sup>	9 <sup>00</sup> -11 <sup>00</sup>

# PROGRAM RADA SYM-OP-IS 2017

## TOPICS i Chairmans:

1. Or In Environmental Management And Natural Resources Management Nataša Petrović, Milan Martić
2. Economic Models and Econometrics Jelena Kočović, Zorica Mladenović
3. Electronic business Božidar Radenković
5. Finance and Banking Jelena Kočović
6. Geoinformation systems Aleksandar Ilić
7. OR in Civil Engineering Goran Čirović, Snežana Mitrović
9. Information Systems I Tehnologies Dušan Starčević, Dejan Simić
10. Research and Development Đuro Kutlača, Dušica Semenčenko
12. Combinatorial Optimization Mirjana Čangalović, Milan Stanojević, Tatjana Davidović
13. Logistics Management Milorad Vidović, Branka Dimitrijević
14. Mathematical Programming Vera Vujčić, Nenad Mladenović, Dragana Makajić-Nikolić
15. Soft Computing Dragan Radojević
16. OR In Management Slavica Petrović, Janko Cvijanović, Milan Martić
18. Military Defense Applications Dalibor Petrović, Dejan Stojković
19. OR in Mining, Geology and Energetics Slobodan Vujić, Igor Miljanović
20. OR in Traffic, Transportation and Communication Dušan Teodorović, Katarina Vukadinović, Milica Šelmić
21. Simulation and Stochastic Model Milorad Stanojević, Dragana Makajić-Nikolić
24. Production and Stock Management Mirko Vujošević, Duško Letić
25. Reliability and Risk Management Mirko Vujošević, Dragana Makajić-Nikolić
26. Multicriteria Analysis and Optimization Milan Stanojević, Branka Dimitrijević
27. Game Theory Đorđe Dugošija, Marija Kuzmanović
28. This year Special topic - Analytics and Optimization in Public Sector Marija Kuzmanović
29. Performance Analysis Milan Martić, Gordana Savić
30. Heuristics Nenad Mladenović, Jozef Kratica, Dragan Urošević
31. Data Science Milija Suknović, Boris Delibašić
32. This year Special topic - Quantitative models in finance Jelena Kočović
33. Soft And Behavioral Operational Research Slavica Petrović, Marija Kuzmanović
34. Business Analitics Mirko Vujošević, Gordana Savić

## CONFERENCE ROOMS:

- Conference room A: TARA (2<sup>nd</sup> Floor )**
- Conference room B: DRINA (1<sup>st</sup> Floor)**
- Conference room C: TISA (1<sup>st</sup> Floor)**
- Conference room D: MORAVA (1<sup>st</sup> Floor)**
- Conference room E: SAVA (Ground Floor)**

## Monday 25. september 2017. year

13:00 – 15:00 Registration and accommodation of participants

15:00 – 16:00 Conference room A – TARA : Opening ceremony

- Welcome word
- Addressing guests
- Referring the carrier to the Charter

16:00 – 17:00 Welcome cocktail (Hotel "Palisad" bar on the Ground Floor)

17:00 – 20:00 Lectures by invitation

*Valery Kalyagin*

*National Research University Higher School of Economics, Nizhny Novgorod, Russia*  
MARKET NETWORK ANALYSIS: IDENTIFICATION OF NETWORK STRUCTURES  
IN MARKET NETWORK

*Miroslav Hudec*

*University of Economics in Bratislava, Slovakia*  
LINGUISTIC SUMMARIES FROM THE DATA: ISSUES AND PERSPECTIVES

*Angelo Sifaleras*

*University of Macedonia, Thessaloniki, Greece*  
EXTERIOR POINT SIMPLEX-TYPE ALGORITHMS FOR LINEAR AND NETWORK  
OPTIMIZATION PROBLEMS

*Nenad Mladenović*

*Mathematical Institute, Serbian Academy of Sciences and Arts, Belgrade, Serbia*  
COMPARATIVE ANALYSIS OF SOME QUALITY FUNCTIONS FOR COMMUNITY  
DETECTION ON NETWORKS

## Tuesday 26. september 2017. year

**Conference room A –  
Tara 9<sup>00</sup>-14<sup>00</sup>**

**Chairman: Dalibor Petrović, Dejan Stojković**

### 18. MILITARY DEFENSE APPLICATIONS

*Милан Ковачевић, Бојан Кузмановић, Дејан Ђорђевић*

КАДРОВСКИ ИНФОРМАЦИОНИ СИСТЕМ И ЕХПЕРТ-СНОИСЕ У ИЗБОРУ ОФИЦИРА ЗА УПУЋИВАЊЕ НА  
ГЕНЕРАЛШТАБНО УСАВРШАВАЊЕ

*Влада Митић, Срђан Димић, Зоран М. Мачак*

УТВРЂИВАЊЕ КРИТЕРИЈУМА ЗА ИЗБОР ОПЦИЈЕ РАЗВОЈА СПОСОБНОСТИ ВОЈСКЕ

*Radomir Janković, Momčilo Milinović*

PRISTUP SIMULACIJI ROJENJA I SINHRONIZOVANOG RAKETNOG UDARA PROTIV AKTIVNE PRETNJE

**Zoran Bajić, Jovica Bogdanov**

RISK ASSESSMENT OF EXPLOSIVE CHARGE REMOVAL FROM ARTILLERY SHELL DURING AMMUNITION DISPOSAL PROCESS

**Zoran Karavidić, Ranko Lojić, Damir Projović**

PODRŠKA ODLUČIVANJU U OPERACIJAMA SNAGA BEZBEDNOSTI PRIMENOM GRUBIH SKUPOVA I BAJESOVE TEOREME

**Bojan Kuzmanović, Milan Kovachević, Miroslav Terzić**

PRIMENA METODA VIŠEKRITERIJUMSKE ANALIZE (AHP I TOPSIS) PRI NABAVCI ŠIROKOPOLASNIH RADIO PRIJEMNIKA

**Srđan Dimić, Vlada Mitić, Miloš Isailović**

ODREĐIVANJE TEŽINSKIH KOEFIICIJENATA KRITERIJUMA PRIMENOM FUZZY DELPHI METODE

**Zoran M. Machak, Aleksandar Ilić**

IZBOR NAJBOĽE DOKTORSKE DISERTACIJE U MINISTARSTVU ODBRANE I VOJSCI SRBIJE PRIMENOM METODE ANALITIČKOG HIJERARHIJSKOG PROCESA

**Milan Kančaraš, Dalibor Petrović, Ivan Petrović**

PREDVIĐANJE BUDUĆIH PERFORMANSI SLOŽENIH BORBENIH SISTEMA

**Milan Kovachević, Bojan Kuzmanović, Dejan Boržević**

KAĐROVSKI INFORMACIONI SISTEM I EXPERT-CHOICE U IZBORU OFICIRA ZA UPUĆIVANJE NA GENERALŠTAPNO USAVRŠAVANJE

**Nebojša Nikolić**

TANDEM QUEUEING CONCEPT IN IMPROVING COMMAND & CONTROL PROCESS IN HYBRID ENVIRONMENT

**Dejan Stojković, Vlada Mitić, Nenad Dimitrijević**

KVANTITATIVNI PRISTUP PROCENI UGROŽENOSTI NACIONALNE BEZBEDNOSTI

**Miloš Isailović, Milan Kančaraš, Srđan Dimić**

UPRAVLJANJE RIZICIMA U VOJNOM DRUMSKOM SAOBRAĆAJU

**Dragan Bojanić, Vladimir Ristić, Marina Bojanic**

IZBOR POLOŽAJA PROTIVKLOPNE BATERIJE U ODBRAMBENOJ OPERACIJI PRIMENOM METODA RANGIRANJA I METODE VIKOR

**Dalibor Petrović, Milan Kančaraš, Nenad Kapor**

VEROVATNOĆA PREŽIVLJAVANJA VAZDUHOPLOVNE PLATFORME U SUKOBU JEDAN NA VIŠE

**Mitar Kovač, Nenad Kovačević**

METODOLOŠKE OSNOVE ODREĐIVANJA BORBENIH MOGUĆNOSTI VOJNOORGANIZACIONIH SISTEMA

**Conference room B –  
Drina 9<sup>00</sup>-11<sup>30</sup>**

**Chairman: Dušan Teodorović, Katarina Vukadinović, Milica Šelmić**

**20. OR IN TRAFFIC, TRANSPORTATION AND COMMUNICATION**

**Dušan Teodorović, Milica Šelmić, Miloš Nikolić, Ivana Jovanović, Marijo Vidas**

METAHEURISTIČKI PRISTUP ZA LOCIRANJE DETEKTORA NA SAOBRAĆAJNIM MREŽAMA

**Bojana Mirković, Tatjana Krstić Simić, Feđa Netjasov, Obrad Babić**

METHODOLOGY FOR SAFETY RISK ASSESSMENT IN FUTURE AIR TRAFFIC MANAGEMENT CONCEPT OF OPERATIONS

**Feđa Netjasov, Dušan Crnogorac**

ASSESSMENT OF SAFETY PERFORMANCE INDICATORS OF FUTURE AIR TRAFFIC MANAGEMENT SYSTEM

**Branka Mikavica, Aleksandra Kostić-Ljubisavljević, Vesna Radonjić Đogotović**

AUCTION-BASED PRICING MECHANISMS FOR CLOUD SPOT INSTANCES



**Emir Ganić, Obrad Babić, Mirjana Čangalović, Milan Stanojević**

AIR TRAFFIC ASSIGNMENT TO REDUCE POPULATION NOISE EXPOSURE: AN APPROACH  
INCORPORATING HUMAN MOBILITY PATTERNS

**Katarina Kukić, Aleksandar Jovanović**

UPRAVLJANJE PREZASIĆENOM RASRSNICOM U REALNOM VREMENU - PRISTUP FAZI LOGIKOM

**Tijana Levjković, Danica Babić, Milica Kalić**

AIRLINE REVENUE MANAGEMENT FOR COMPLEX NETWORKS

**Danica Babić, Boris Begović, Tijana Levjković**

FROM LOYALTY TO FEAR: PASSENGERS' PREFERENCES AND THEIR IMPACT ON THE AIRLINE  
NETWORK STRUCTURE

**Mirjana Kovačić, Ante Mrvica**

SELECTING THE SIZE AND TYPE OF A VESSEL FOR THE PURPOSE OF MARITIME CONNECTION OF  
MAINLAND AND ISLANDS AS WELL AS BETWEEN THE ISLANDS IN CROATIA

**Milorad Vidović, Branka Dimitrijević, Rosalia Camporeale, Leonardo Caggiani**

JEDAN PRISTUP MODELIRANJU JAVNOG BICIKLISTIČKOG SISTEMA

**Bratislav Lazić, Batanović Vladan, Petrović Radivoj, Guberinić Slobodan**

UTICAJ „FILTRIRANJA“ PARCIJALNE SAOBRAĆAJNE STRUJE NA KAPACITET SIGNALISANE RASKRSNICE

**Conference room B –  
Drina 12<sup>00</sup>-14<sup>00</sup>**

**Chairman: Milorad Stanojević, Dragana Makajić-Nikolić**

**21. SIMULATION AND STOCHASTIC MODEL**

**Biljana Popović, Aleksandar Jovanović, Vidosav Marković**

DETERMINATION OF PARAMETERS OF BREAKDOWN TIME DELAY DISTRIBUTION BY EXPECTATION  
MAXIMIZATION ALGORITHM

**Siniša Arsić**

MODEL ZA UPRAVLJANJE ZALIHAMA MOBILNIH UREĐAJA U POSLOVNICAMA KOMPANIJE TELEKOM  
SRBIJA

**Aleksandar Varjačić, Milorad Stanojević**

SIMULACIJA RADA POŠTANSKOG ŠALTERSKOG SISTEMA

**Vladimir Božin, Boban Karapetrović, Milica Jovalekić**

MARTINGALE I NEJEDNAKOSTI

**Dragan Kitanović, Marko Đogatović, Milorad Stanojević**

SIMULACIONI MODEL PLATFORME ZA DEICING I ANTI-ICING AERODROMA „NIKOLA TESLA“ U  
BEOGRADU

**Conference room C –  
Tisa 9<sup>00</sup>-11<sup>00</sup>**

**Chairman: Milorad Vidović, Branka Dimitrijević**

**13. LOGISTICS MANAGEMENT**

**Jelena Končar, Zita Petrović Katai**

UPRAVLJANJE KONFLIKTIMA U KANALIMA MARKETINGA

**Дражен Поповић, Ненад Бјелић**

MIQP МОДЕЛ ЗА РЕШАВАЊЕ ПРОБЛЕМА ДОДЕЉИВАЊА КОМИСИОНИХ НАЛОГА

**Branislava Ratković, Aleksandra Čolović**

PROJEKTOVANJE POVRATNO LOGISTIČKE MREŽE ZA MOBILNE TELEFONE

**Bratislav Lazić, Gordana Radivojević, Gorana Šormaz**

SIMULACIJA OPERATIVNIH STRATEGIJA I PRAVILA DISPEČIRANJA CROSS DOCK TERMINALA

**Драгана Дреновац, Милорад Видовић**

ОПТИМАЛНО РАСПОРЕЂИВАЊЕ ВОЗИЛА ЗА ПРЕВОЗ ШЕЋЕРНЕ РЕПЕ

**Ivana Vukićević Biševac, Katarina Vukadinović**

NOVI MATEMATIČKI MODEL PROBLEMA DNEVNOG RASPOREĐIVANJA RADNIKA U LUČKIM KONTEJNERSKIM TERMINALIMA

SAOPŠTENJE

**Jelena Milutinović, Biljana Grgurović, Slavica Radosavljević, Mirjana Popović**

ODRŽIVOST POŠTANSKIH USLUGA U RURALNOM PODRUČJU I NJIHOV ZNAČAJ ZA REGIONALNI RAZVOJ

**Conference room C –  
Tisa 11<sup>30</sup>-14<sup>00</sup>**

**Chairman: Dušan Starčević, Dejan Simić**

**9. INFORMATION SYSTEMS I TECHNOLOGIES**

**Olja Latinović**

PREPOZNAVANJE GOVORNIKA KAO SISTEM ZASTITE U IOT TEHNOLOGIJAMA

**Hana Stefanović, Radosav Veselinović**

OPTIMIZACIJA ALGORITMA ZA SEGMENTACIJU REGISTARSKIH TABLICA U USLOVIMA OTEŽANE DETEKCIJE

**Saša Bošnjak, Tatjana Davidov**

SOFTVERСКЕ METODOLOGIJE U ULOZI KVALITETA SOFTVERSKIH REŠENJA

**Slađana Janković, Snežana Mladenović, Ana Uzelac, Dušan Mladenović, Stefan Zdravković**

MODEL INTEGRISANJA BIG DATA ANALITIKE SA TRADICIONALNIM SISTEMIMA POSLOVNE INTELIGENCIJE BAZIRAN NA VIRTUELIZACIJI PODATAKA

**Marina Jovanović Milenković, Svetlana Jovanović, Mirjana Drakulić**

BEZBEDNOST I ZAŠTITA PODATAKA U INTEGRISANOM ZDRAVSTVENOM INFORMACIONOM SISTEMU

**Željko Gavrić, Miroslav Minović**

TEHNOLOGIJE PRAĆENJA POKRETA OKA

**Rade Stankić, Ana Aleksić Mirić**

IZAZOVI DIZAJNA ORGANIZACIJE PRI PRIMENI KLAUD TEHNOLOGIJE

**Conference room D –  
Morava 09<sup>00</sup>-14<sup>00</sup>**

**Chairman: Jelena Kočović**

**5. FINANCE AND BANKING**

**Ражко М. Буквић**

КОНЦЕНТРАЦИЈА И КОНКУРЕНЦИЈА У БАНКОВНОМ СЕКТОРУ СРБИЈЕ

**Saša Randelović**

TAX-BENEFIT POLICY RESPONSE TO INCOME INEQUALITY TRENDS IN EUROPE DURING THE CRISIS

**Irena Janković**

MERE PERFORMANSI PORTFOLIJA – MOGUĆNOSTI ZA PRIMENU NA FINANSIJSKOM TRŽIŠTU SRBIJE

**Ivana Popović Petrović**

ULOGA FINANSIRANJA SPOLJNE TRGOVINE I OGRANIČENJA U VREMENIMA EKONOMSKE KRIZE

**Violeta Cvetkoska, Bojana Radinović**

THE PHENOMENON OF THE NEGATIVE INTEREST RATES WITH A SPECIAL REVIEW OF THE MACEDONIAN BANKING SECTOR

**Nina Milenković**

PRILAGOĐAVANJE DISKONTNE STOPE U ZAVISNOSTI OD PREDMETA I SVRHE PROCENE

**Jelena Kočović, Mirela Mitrašević, Dejan Trifunović**

ADVANTAGES AND DISADVANTAGES OF METHODS FOR ASSESMENT OF LOSS RESERVATIONS IN NON-LIFE INSURANCE

**Chairman: Jelena Kočović, Zorica Mladenović**

## 2. ECONOMIC MODELS AND ECONOMETRICS

**Vesna D. Jablanovic**

HAOTIČNI MODEL RASTA GINI KOEFICIJENTA

**Jasna Soldić-Aleksić**

SAVREMENI ASPEKTI DIGITALNE EKONOMIJE: UTICAJ FENOMENA BIG DATA

**Tanja Milić, Veljko Jeremić**

PROJEKTOVANJE NOVE KORPORATIVNE KULTURE U CILJU DOSTIZANJA LIDERSKE POZICIJE ORGANIZACIJE U SAVREMENOM POSLOVNOM OKRUŽENJU

**Jelena Stanojević, Maja Jandrić**

NEKI MATEMATIČKI MODELI ZA ODREĐIVANJE RAVNOTEŽE U IS-LM MODELU I ANALIZA REŠENJA

**Бојан Кресојевућ**

МАТЕМАТИЧКИ МОДЕЛ ЗА ОЦЈЕНУ ЕФЕКТА КУПОВИНЕ ДОМАЋИХ ПРОИЗВОДА У РЕПУБЛИЦИ СРПСКОЈ

**Conference room D –  
Morava 11<sup>30</sup>-12<sup>00</sup>**

**Chairman: Slavica Petrović, Janko Cvijanović, Milan Martić**

## 16. OR IN MANAGEMENT

**Radenko Marić, Goran Vukmirović**

MODELI I TEHNIKE ISPITIVANJA STAVOVA I ZADOVOLJSTVA POTROŠAČA U FUNKCIJI VEZIVANJA ZA IMIDŽ MALOPRODAJNOG OBJEKTA

**Conference room E – Sava  
09<sup>00</sup>-11<sup>00</sup>**

**Chairman: Aleksandar Ilić**

## 6. GEOINFORMATION SYSTEMS

**Миодраг Регодић, Љубомир Гиговић, Синиша Дробњак, Рајка Мијатовић**

ФОРМАТИ ЗАПИСА ДИГИТАЛНИХ СНИМАКА

*Синиша Дробњак, Љуботир Гизовић, Драгољуб Секуловић, Ненад Гаљак*  
ОЦЕНА ПОТПУНОСТИ ДИГИТАЛНЕ ТОПОГРАФСКЕ КАРТЕ РАЗМЕРЕ 1:25 000

*Љубомир Гиговић, Мiodrag Regodić, Синиша Дробњак*  
PRIMENA GIS MODELA U IZRADI MAPE HAZARDA OD POPLAVA

*Gorana Todorić, Dejan Vasić, Dragoljub Sekulović*  
TEHNIKA VLBI – OSNOVE, STATUS I CILJEVI

*Aleksandar Ilić, Zoran Srdić, Slaviša Tatomirović*  
UTICAJ PARAMETARA RAZLIČITIH ELIPSOIDA NA TRANSFORMACIJE GEODETSKIH KOORDINATA

*Viktor Marković, Ana Vučićević, Radoje Banković*  
POTENCIJALNA PRIMENA 3D ŠTAMPE ZA IZRADU RELJEFNIH KARATA U GIS OKRUŽENJU

**Conference room E – Sava**  
**11<sup>30</sup>-13<sup>00</sup>**

*Chairman: Mirko Vujošević, Gordana Savić*

#### 34. BUSINESS ANALITICS

*Katarina Oreščanin*  
OPTIMIZACIJA NIVOVA ZADOVOLJENJA TRAŽNJE U PREHRAMBENOJ INDUSTRIJI

*Ana Belić*  
ODREĐIVANJE OPTIMALNE KOLIČINE SNABDEVANJA KORIŠĆENJEM SISITEMA PREDVIĐANJA

*Milan Radojičić, Gordana Savić, Aleksandar Đoković, Veljko Jeremić*  
EFIKASNOST I USPEH SREDNJIH ŠKOLA PRI UPISU NA FAKULTET

**Conference room E – Sava**  
**13<sup>00</sup>-14<sup>00</sup>**

*Chairman: Milan Stanojević, Branka Dimitrijević*

#### 26. MULTICRITERIA ANALYSIS AND OPTIMIZATION

*Sanja Puzović, Vladan Paunović, Miroslav Radojičić, Jasmina Vesić Vasović, Milena Vujović*  
VIŠEKRITERIJUMSKI PRISTUP SELEKCIJI DOBAVLJAČA ZASNOVAN NA AHP METODI

*Mladen Janjić, Mališa Žižović, Nada Damljanović, Katarina Pavlović*  
STABLO AKCIJSKIH PROMENA ZA KOREKCIJU TEŽINSKIH KOEFICIJENATA

*Milan Mihajlović, Snežana Krstić, Radovan Damnjanović*  
PRIMENA AHP METODE U REALIZACIJI NABAVKI

*Stanislava Bosiočić, Miodrag Kostić, Marko Stanković*  
PRIMENA VIŠEKRITERIJUMSKE OPTIMIZACIJE NA IZBOR DIZAJNA DRUGOG REDA GRADSKE TRIGONOMETRIJSKE MREŽE

**Wednesday 27. september 2017. year**

**Conference room A – Sava**  
**09<sup>00</sup>-10<sup>00</sup>**

**Chairman: Đorđe Dugošija, Marija Kuzmanović**

**27. GAME THEORY**

**Peter N. Posch, Vladislav Radak**

A GAME THEORY APPLICATION ON PACKAGE ASSET AUCTIONS

**Milena Vukić**

HOTELINGOV MODEL I IZBOR LOKCIJE U USLUŽNOM SEKTORU

**Sofija Prokić**

GRUPNO NASPRAM INDIVIDUALNOG PONAŠANJA U EKSPERIMENTALNIM IGRAMA

**Conference room A – Sava  
10<sup>00</sup>-11<sup>00</sup>**

**Chairman: Mirko Vujošević, Dragana Makajić-Nikolić**

**25. RELIABILITY AND RISK MANAGEMENT**

**Kristina Andrić**

PROCENA RIZIKA U PROCESU EKSPLOATACIJE PRIRODNIH RESURSA METODOM HFACS

**Petar Pavlović, Dragana Makajić-Nikolić, Mirko Vujošević**

KRITIČNOST KOMPONENTI U MULTI STATE SISTEMIMA

**Conference room A – Sava  
11<sup>00</sup>-11<sup>30</sup>**

**Chairman: Milija Suknović, Boris Delibašić**

**31. DATA SCIENCE**

**Aleksandar Simović**

BIG DATA ANALYTICS IN PUBLIC ADMINISTRATION

**Višnja Istrat, Dajana Matović**

PROJEKAT IMPLEMENTACIJE ASOCIJATIVNIH PRAVILA NA PRIMERU TEKSTILNE INDUSTRIJE

**Conference room A – Sava  
12<sup>00</sup>-13<sup>00</sup>**

**Chairman: Slavica Petrović, Marija Kuzmanović**

**33. SOFT AND BEHAVIORAL OPERATIONAL RESEARCH**

**Marija Kuzmanović, Isidora Kojčić**

SARADNJA U EKSPERIMENTALNOJ IGRI JAVNOG DOBRA

**Petrija Milojević, Marija Kuzmanović**

FAKTORI SARADNJE U DVOETAPNOJ ULTIMATUM IGRI: REZULTATI EKSPERIMENTA

**Conference room A – Sava  
13<sup>00</sup>-14<sup>00</sup>**

**Chairman: Milan Martić, Gordana Savić**

**29. PERFORMANCE ANALYSIS**

*Lara Stojanović, Gordana Savić*

SELEKCIJA KLJUČNIH INDIKATORA PERFORMANSI PRIMENOM KVANTITATIVNIH METODA

*Milica Maričić*

PERFORMANCE ANALYSIS, PREDICTION, AND WEIGHTING COEFFICIENTS ASSIGNMENT: A LITERATURE REVIEW

*Nela Cvetković, Slobodan Morača, Angela Fajsi*

IMPROVEMENT OF SOFTWARE DEVELOPMENT PROJECT PERFORMANCES WITH SCRUMBAN

*Milica Jovanović, Lena Đorđević, Aleksandra Marinković*

UTICAJ INDIKATORA PERFORMANSI TEHNOLOŠKOG MENADŽMENTA NA GLOBALNE INDEKSE ZA RANGIRANJE ZEMALJA

**Conference room B –  
Drina 09<sup>00</sup>-11<sup>00</sup>**

**Chairman: Đuro Kutlača, Dušica Semenčenko**

**10. RESEARCH AND DEVELOPMENT**

*Ana Krstić, Predrag Mimović, Dragana Rejman Petrović*

MERENJE ISTRAŽIVAČKO-RAZVOJNIH PERFORMANSI REPUBLIKE SRBIJE

*Lazar Živković, Đuro Kutlača, Sanja Popović-Pantić*

EU LEVEL SUPPORT PROGRAMMES FOR YOUNG INNOVATORS AND ENTREPRENEURS

*Dušica Semenčenko, Dijana Štrbac, Đuro Kutlača*

FOSTERING COOPERATION BETWEEN TRIPLE HELIX INSTITUTIONS IN THE DANUBE REGION

*Dušan Rajić, Obrad Čabarkapa, Negovan Ivanković*

INVENTOLOGIJA I TRŽIŠTE

*Angela Fajsi, Slobodan Morača, Nela Cvetković*

NETWORK ALIGNMENT ALGORITHMS

**Conference room B –  
Drina 11<sup>30</sup>-13<sup>30</sup>**

**Chairman: Dragan Radojević**

**15. SOFT COMPUTING**

*Athanasios Dragoslis, Panagiota Digkoglou, Vassilis Kostoglou, Jason Papathanasiou*

USING FUZZY AHP AND FUZZY VIKOR TO FIND THE MOST SUITABLE CROPS IN A REGION

**Dragan Pamučar, Goran Ćirović**

PRIMENA INTERVALNIH FUZZY-GRUBIH BROJEVA U VIŠEKRITERIJUMSKOM ODLUČIVANJU

**Dušan Stevanović, Ivana Dragović**

PREPOZNAVANJE OBJEKATA SA SLIKE KORIŠĆENJEM VAJOLA-DŽONS ALGORITMA

**Nevena Vranić, Pavle Milošević, Ivana Dragović, Bratislav Petrović**

PREDVIĐANJE PRODAJE NAFTNIH DERIVATA KORIŠĆENJEM NEURONSKIH MREŽA

**Marko Tadić, Marija Stamatović, Pavle Milošević, Ana Poledica**

UTICAJ NEDOSTAJUĆIH VREDNOSTI NA KLASIFIKACIJU: PRIMER PREDVIĐANJA BANKROTSTVA SREDNJIH PREDUZEĆA U SRBIJI

**Duško Letić**

SOME CERTAIN PROPERTIES OF THE GENERALIZED OF THE HYPERSPHERE FUNCTION

**Dragan Radojević**

BULOVSKI KONZISTENTNA REALIZACIJA TEORIJE FAZI SKUPOVA TIP 2

**Conference room B –  
Drina 13<sup>30</sup>-14<sup>00</sup>**

**Chairman: Božidar Radenković**

**3. ELECTRONIC BUSINESS**

**Miloš Spasojević**

ANALIZA PRISUTNOSTI I POVEZANOSTI FAKULTETA UNIVERZITETA U BEOGRADU NA DRUŠTVENOM MREŽI FACEBOOK

**Conference room C – Tisa  
09<sup>00</sup>-11<sup>30</sup>**

**Chairman: Nataša Petrović, Milan Martić**

**1. OR IN ENVIRONMENTAL MANAGEMENT AND NATURAL RESOURCES MANAGEMENT**

**Saša T. Bakrač**

NATO BOMBARDOVANJE REPUBLIKE SRBIJE 1999. GODINE - MODEL PROCENE EKOLOŠKOG RIZIKA

**Zlate Veličković, Zoran Bajić, Ljubomir Gigović, Radovan Karkalić, Krstimir Pantić, Aleksandar Marinković**

OPTIMIZACIJA BROJA EKSPERIMENTATA ADSORPCIJE PRIMENOM MODELA ODZIVNIH POVRŠINA

**Дејан Церовина**

УПРАВЉАЊЕ ЕКОЛОШКИМ РИЗИКОМ ОД ШУМСКИХ ПОЖАРА – СТУДИЈА СЛУЧАЈА: ДЕЛИБЛАТСКА ПЕШЧАРА

**Dušan Vasiljević, Majda Sedej**

CHARGE REVENUE MANAGEMENT IN ENVIRONMENTAL PROTECTION SECTOR

**Marko Ćirović**

PREGLED PRIMENE METODA OPERACIONIH ISTRAŽIVANJA U EKOLOŠKOM MENADŽMENTU

**Igor Lavrnić, Minja Marinović, Milena Popović, Bisera Andrić Gušavac**

SOLAR STORM ATTACKS, EFFECTS AND PUBLIC AWARENESS: A CASE STUDY OF THE REPUBLIC OF SERBIA

*Damjan Maletič, Tatjana Borojević, Nataša Petrović, Matjaž Maletič, Marjan Senegačnik*  
KVALITET VISOKOŠKOLSKOG EKOLOŠKOG OBRAZOVANJA ZA ODRŽIVOST

*Tatjana Borojević, Matjaž Maletič, Kristina Stanojević, Aleksandar Đoković, Jelena Andreja Radaković, Nemanja Milenković*  
ULOGA MLADIH U ZAŠTITI ŽIVOTNE SREDINE I ODRŽIVOSTI LOKALNE ZAJEDNICE

**Conference room C – Tisa**  
**12<sup>00</sup>-12<sup>30</sup>**

*Chairman: Slobodan Vujić, Igor Miljanović*

19. OR IN MINING, GEOLOGY AND ENERGETICS

*Sandra Jednak*

EKONOMSKI EFEKTI REGIONALNE INTEGRACIJE TRŽIŠTA ELEKTRIČNE ENERGIJE

*Jelisaveta Krstivojević, Darko Šošić, Aleksandar Savić*

PODEŠAVANJE I KOORDINACIJA PREKOSTRUIJNIH RELEJA U DISTRIBUTIVNOJ MREŽI

**Conference room C – Tisa**  
**12<sup>30</sup>-13<sup>00</sup>**

*Chairman: Mirjana Čangalović, Milan Stanojević, Tatjana Davidović*

12. COMBINATORIAL OPTIMIZATION

*Aleksandar Savić, Zoran Maksimović, Milena Bogdanović, Jozef Kratica*

KONVEKSNA I SLABO KONVEKSNA DOMINACIJA ZA HAMINGOVE GRAFOVE

*Dragoš Cvetković, Mirjana Čangalović, Zorica Dražić, Vera Kovačević-Vujčić*

COMPOSITE COMPLEXITY INDICES FOR THE TRAVELING SALESMAN PROBLEM

**Conference room C – Tisa**  
**13<sup>00</sup>-14<sup>00</sup>**

*Chairman: Mirko Vujošević, Duško Letić*

24. PRODUCTION AND STOCK MANAGEMENT

*Zoran Popović, Marko Backović, Marijana Novković*

PRIMENA WAGNER-WHITIN I WEGELMANS – HOESEL – KOLEN MODELA U OPTIMIZACIJI NABAVKE ZALIHA

*Zorica Mitrović, Mirko Vujošević, Marija Todorović*

OKVIR ZA ANALIZU SISTEMA ZA MERENJE PERFORMANSI LANACA SNABDEVANJA

*Zoran Rakićević*

PREDGLAD PROBLEMA JOB SHOP: KARAKTERISTIKE I METODE REŠAVANJA

**Conference room D –**



**Morava 09<sup>00</sup>-10<sup>00</sup>**

**Chairman: Vera Vujčić, Nenad Mladenović, Dragana Makajić-Nikolić**

**14. MATHEMATICAL PROGRAMMING**

**Marko D. Petković, Predrag S. Stanimirović**

LEAST SQUARES SOLUTIONS OF MATRIX EQUATIONS AND THEIR APPLICATIONS

**Predrag S. Stanimirović, Marko D. Petković**

ACCELERATED GRADIENT DESCENT METHODS FOR NONLINEAR OPTIMIZATION

**Conference room D –  
Morava 10<sup>00</sup>-11<sup>30</sup>**

**Chairman: Nenad Mladenović, Jozef Kratica, Dragan Urošević**

**30. HEURISTICS**

**Tatjana Davidović**

PARALELIZACIJA METAHEURISTIČKIH METODA

**Rava Filipović**

INTEGRACIJA OBNOVLJIVIH IZVORA I OPTIMALNO USMJERAVANJE ENERGIJE

**Dušan Džamić, Miroslav Marić, Aleksandar Đenić, Bojana Lazović**

A VARIABLE NEIGHBORHOOD SEARCH FOR CREATING STUDENT GROUPS WITH SIMILAR CHARACTERISTICS

**Nataša Glišović, Tatjana Davidović, Miodrag Rašković**

KLASTEROVANJE KADA PODACI NEDOSTAJU KORIŠĆENJEM METODE PROMENLJIVIH OKOLINA

**Conference room E –  
Morava 09<sup>00</sup>-14<sup>00</sup>**

**Chairman: Goran Ćirović, Snežana Mitrović**

**7. OR IN CIVIL ENGINEERING**

**Ljubo Marković, Ljiljana Milić Marković, Velimir Dutina, Miljan Kovačević**

PRIMENA VEŠTAČKIH NEURONSKIH MREŽA U REŠAVANJU PROBLEMA PREDVIĐANJA (PREDIKCIJE) INVESTICIONE VREDNOSTI

**Miloš Marković, Marko Stanković**

APPLICATION OF SCORING MODEL IN MULTI-CRITERIA DECISION MAKING IN THE SELECTION OF DIGITAL CAMERA FOR ASTRONOMICAL OBSERVATIONS OF THE NIGHT SKY

**Slavoljub Tomić, Miroslav Marčeta**

MOGUĆNOST PRIMENA FOTOGRAMETRIJSKOG 3D MODELIRANJA OBJEKATA I DINAMIČKIH KRETANJA U GRAĐEVINARSTVU

**Slobodan Pandžić, Slavoljub Tomić, Dragan Macanović**

ANALIZA UTICAJA SUBJEKTIVNOSTI IZBORA BROJA I POZICIJA TAČAKA KOJE SE SNIMAJU ZA OBRAČUN ZAPREMINE DEPONOVANOG MATERIJALA

**Snežana Mitrović, Goran Ćirović, Dragan Nikolić**

OPTIMUM DESIGN OF STEEL FRAME WITH THE SOCIAL SPIDER OPTIMIZATION METHOD

**Горан Ћировић, Зоран Поповић, Вуле Алексић**

ГЕОИНФОРМАЦИОНИ СИСТЕМ ЗА УПРАВЉАЊЕ ОБЈЕКТИМА КАНАЛИЗАЦИОНИХ МРЕЖА

*Slobodan Jovović*

PRIMENA VIŠEKRITERIJUMSKE ANALIZE PRI PROCENI VREDNOSTI NEPOKRETNOSTI

*Зоран Поповић, Зоран Живковић, Зора Алексић*

МЕНАѢМЕНТ ОБЈЕКТА ПУТНЕ МРЕЖЕ

*Igor Peško, Goran Marković, Vladimir Mučenski, Aleksandra Vujkov, Dragana Bibić*

MODELS FOR ESTIMATING CONSTRUCTION COSTS FOR RESIDENTIAL BUSINESS BUILDINGS

**Conference room E –  
Morava 11<sup>30</sup>-12<sup>30</sup>**

**PERI SYSTEMS - OPTIMIZATION OF THE LAYOUT OF THE FORMWORK**

**Conference room E –  
Morava 12<sup>30</sup>-14<sup>00</sup>**

*Nataša Popović-Miletić, Snežana Mitrović, Dragan Nikolić*

OPTIMIZACIJA MREŽNOG DIJAGRAMA PROJEKTA PRIMJENOM BUFFER-A

*Слободан Станаревић, Јелена Пралица*

ВРЕДНОВАЊЕ КОНСУЛТАНТСКИХ УСЛУГА

*Darija Gajić, Aleksandar Janković, Ljubiša Preradović*

INDIKATOR ENERGETSKE EFIKASNOSTI REPREZENTATIVNOG UZORKA POSTOJEĆEG VRTIĆA U BANJOJ LUCI PREMA PROJEKTNIM I IZMJERENIM PARAMETRIMA

*Saša B.Čvoro, Malina Čvoro, Una Umićević, Aleksandar Janković*

ARHITEKTURA OBRAZOVNIH PROSTORA I DNEVNA OSVIJETLJENOST

*Ljubiša Preradović, Darko Divnić*

PODRŠKA ODRŽAVANJU ZGRADA ZAJEDNICA ETAŽNIH VLASNIKA

*Dušan Turina, Aleksandar Kostić, Bojan Milošević*

OPTIMALNI IZBOR GUSTINE MREŽE LINIJSKIH NOSAČA PRIMENOM METODE KONAČNIH RAZLIKA

*Dragan Bojović, Ljiljana Lončar, Ksenija Janković, Marko Stojanović*

ASSESSMENT CONCRETE COMPRESSIVE STRENGTH BY CONVENTIONAL AND SOFT PROGRAMMING TECHNIQUES

**20:00 GALA DINNER (CEREMONY CLOSING)**

**Thursday 27. september 2017. year**

**Conference room B – Tisa  
09<sup>00</sup>-11<sup>00</sup>**

*Chairman: Marija Kuzmanović*

## 28. ANALYTICS AND OPTIMIZATION IN PUBLIC SECTOR

*Ivana Mijatovic, Rade Lazovic*

ANALYZING THE QUALITY IN PUBLIC PROCUREMENT - APPLICATION OF THE QUADRATIC QUALITY LOSS FUNCTIONS

*Zorica Tanasković, Gordana Milosavljević, Milovan Milivojević, Vesna Vasović*

ANN CLASSIFICATOR AS SUPPORT IN STRATEGY FOR FARMERS' EDUCATION

*Svetlana Jovanović, Mihailo Jovanović*

ASSESSMENT OF THE INSTITUTIONAL FRAMEWORK OF E-GOVERNMENT IN THE REPUBLIC OF SERBIA

*Kristina Pajić, Gordana Savić, Marija Kuzmanović*

RESIDENTIAL ATTRACTIVENESS OF THE CITIES AND TOWNS

*Olivera Mihailović, Nevenka Žarkić-Joksimović, Nataša Petrović, Dragana Makajić-Nikolić, Jelena Andreja Radaković*

ECONOMIC AND ENVIRONMENTAL EFFECTIVENES OF INFECTIOUS MEDICAL WASTE DISPOSAL SYSTEM: A CASE STUDY OF THE TERTIARY HEALTH-CARE INSTITUTION

*Konstantinos Petridis, Evangelos Grigoroudis*

A MILP/GP MODEL FOR RENEWABLE ENERGY PRODUCTION FROM BIOMASS POWER PLANTS USING FINANCIAL ANALYSIS: THE CASE OF GREECE

**Conference room C –  
Morava 09<sup>00</sup>-11<sup>00</sup>**

**Chairman: Jelena Kočović**

## 32. QUANTITATIVE MODELS IN FINANCE

*Amela Piralić, Aida Brkan-Vejzović*

KORELACIONA ANALIZA U FUNKCIJI PLANIRANJA I PREDVIĐANJA ULAGANJA NA TRŽIŠTU KAPITALA

*Ana Milovanović, Rastko Aničić, Aleksandar Rakićević, Aleksandar Đoković*

FORECASTING VOLATILITY OF BELEX15 MARKET INDEX USING A HYBRID ANN-GARCH MODEL