



DRUŠTVO  
TERMIČARA SRBIJE

**IEEP '17**

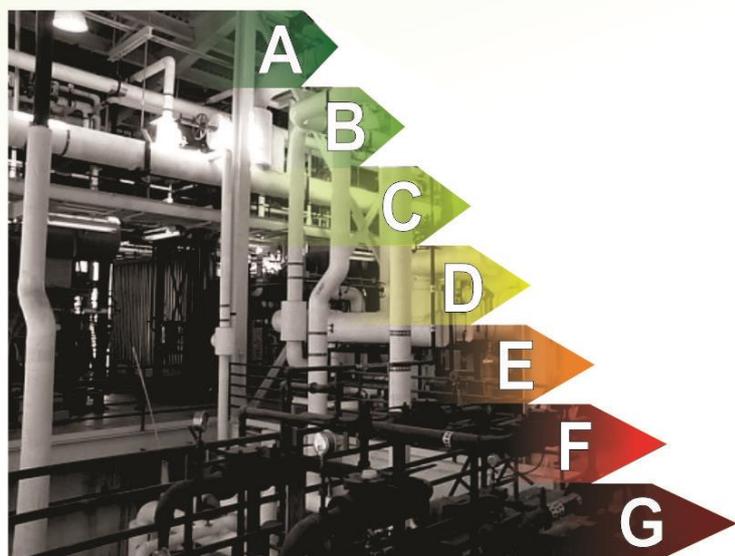
VI Regionalna konferencija / Regional Conference:

**INDUSTRIJSKA ENERGETIKA I ZAŠTITA ŽIVOTNE SREDINE  
U ZEMLJAMA JUGOISTOČNE EVROPE**

**INDUSTRIAL ENERGY AND ENVIRONMENTAL PROTECTION  
IN SOUTH EASTERN EUROPEAN COUNTRIES**

# PROGRAM

Odmaralište Ratko Mitrović, Zlatibor, Srbija  
21 - 24. jun 2017.



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## SADRŽAJ / CONTENTS

POZIV / INVITATION .....	4
PROGRAMSKI ODBOR / PROGRAM COMMITTEE .....	5
ORGANIZACIONI ODBOR / ORGANISATIONAL COMMITTEE.....	7
PREDAVAČI PO POZIVU / INVITED LECTURERS .....	8
SATNICA / SCHEDULE .....	13
OSNOVNI CILJEVI IEEP-a 2017 / BASIC GOALS OF IEEP '17.....	15
OSNOVNI SADRŽAJI IEEP-a 2017 / BASIC CONTENTS OF IEEP '17 .....	15
TEMATSKE CELINE / SUBJECT AREAS .....	16
PRELIMINARNI PROGRAM / PRELIMINARY PROGRAM.....	17
ZVANIČAN JEZIK KONFERENCIJE / CONFERENCE OFFICIAL LANGUAGE.....	29
DRUŠTVENI PROGRAM / SOCIAL PROGRAM.....	29
KOTIZACIJA / REGISTRATION FEE .....	29
REZERVACIJA SMEŠTAJA / ACCOMMODATION RESERVATION.....	29

## POZIV / INVITATION

Poštovane kolege,

Industrija u zemljama Jugoistočne Evrope ima slične probleme u vezi energetske efikasnosti i zaštite životne sredine. Preduzeća sa malom energetskom efikasnošću i sa zastarelim industrijskim postrojenjima, našla su se na otvorenom tržištu. Učešće potrošnje energije u ukupnim troškovima preduzeća je toliko veliko da se svaka ušteda u ovoj oblasti direktno odražava na ukupnu produktivnost, a time i konkurentnost privrednog subjekta. Investicije u oblast racionalne potrošnje energije i zaštite životne sredine spadaju u veoma efikasna ulaganja. Investiciona sredstva za ovu oblast su, zahvaljujući brojnim fondovima međunarodnih institucija, dostupnija i znatno povoljnija od kredita poslovnih banaka.

Zbog svega navedenog, potvrđeno je naše očekivanje da će teme konferencije pobuditi značajno interesovanje stručnjaka iz Istočne i Jugoistočne Evrope i šire. Na konferenciji će biti predstavljeno preko 80 radova autora iz 8 zemalja, koji će doći na konferenciju da razmene iskustva i informacije, prošire svoja naučna i tehnička saznanja, kako bi na najracionalniji način povećali u svojim zemljama energetske efikasnosti i zaštitili životnu sredinu.

Konferencija će biti povod za poslovne susrete sponzora i izlagača konferencije koji će industrijskim preduzećima predstaviti najnoviju tehnologiju koja doprinosi energetske efikasnosti i zaštiti životne sredine.

Pozivamo vas da svojim aktivnim učešćem na IEEP konferenciji doprinesete ostvarenju njenih ciljeva.



**Prof. Goran JANKES, PhD**

predsednik Organizacionog odbora i potpredsednik  
Društva termičara Srbije / Organizing Committee  
President Vice President of the Society of Thermal  
Engineers of Serbia

Dear Colleagues,

The industry of the Southeast European countries is facing numerous problems, similar within the entire region and wider, in terms of energy efficiency and environmental protection. Outdated industrial facilities with low energy efficiency are confronted with the open market economies. The energy consumption costs make a substantial part of the total expenditure of enterprises so that any savings in this area will have a direct influence on productivity and the competitive capacity of enterprises. Investments into rational energy consumption and environmental protection are seen as very effective investments. Due to number of funds available through international institutions, the investments in this area are more accessible and favorable than, for example, credits from commercial banks.

Our belief that the conference will raise huge interest among experts from the East and Southeast Europe is confirmed. The conference will present over 80 papers with authors coming from 8 different countries to exchange experience and information, expand their scientific and technical knowledge, in order to increase the energy efficiency and enhance environmental protection of their countries in the most rational manner.

The Conference will provide opportunity for business meetings of sponsors and exhibitors presenting to industry the latest technology that enhances the energy efficiency and environmental protection.

Therefore, we take this opportunity to invite you to actively take part and contribute to the goals of the IEEP Conference.



**Prof. Milan RADOVANOVIC, PhD**

predsednik Društva termičara Srbije / President of the  
Society of Thermal Engineers of Serbia

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## PREDAVAČI PO POZIVU / INVITED LECTURERS



**Dr Miodrag Mesarović**, redovni član Akademije inženjerskih nauka Srbije (AINS), radi u Energoprojektu u Beogradu kao specijalni savetnik. Najveći deo radnog veka je posvetio proučavanju i projektovanju složenih energetskih postrojenja i sistema. Učestvovao je u nekoliko stotina privrednih projekata u zemlji i inostranstvu iz oblasti energetskih sistema i energetskih tehnologija, kao i u brojnim naučno-istraživačkim projektima o specifičnim problemima u termoenergetici, nuklearnoj tehnologiji, zaštiti životne sredine, proizvodnji pijaće vode i drugim. Učestvovao je na velikom broju stručnih i naučnih skupova u zemlji i inostranstvu i publikovao oko 360 stručnih i naučnih radova iz oblasti strateškog razvoja energetike, termoenergetike, racionalne potrošnje energije, primene obnovljivih izvora energije, zaštite životne sredine, globalnih promena klime, i drugih. Dr Miodrag Mesarović je generalni sekretar Srpskog komiteta Svetskog saveta za energiju (WEC) i član Naučnog odbora Društva termičara Srbije, idr. Član je i uređivačkih odbora časopisa "Tehnička dijagnostika", "Nuklearna tehnologija i zaštita od zračenja" i "Elektroprivreda" i recenzent više specijalizovanih knjiga i monografija. Držao je predavanja na postdiplomskim studijama na univerzitetima bivše Jugoslavije.

*MIODRAG MESAROVIĆ, PhD, Full Member of the Academy of Engineering Sciences of Serbia (AESS) is employed by Energoprojekt Consulting Engineers Co. in Belgrade as a senior advisor. Major part of the career he devoted to studies and designs of complex energy facilities and systems. He has taken part in several hundred projects in Serbia and abroad in the fields of energy systems and facilities, as well as in numerous research and development projects in specific subjects of thermal engineering, nuclear technology, environmental protection, water production technology and others. Dr Mesarović has taken part in a large number of professional and scientific conferences in Serbia and abroad, and published cca 360 reports in the fields of energy development strategies, thermal engineering, energy efficiency, renewable energy sources, environmental pollution, etc. Dr Mesarović is the secretary general of Serbian member committee of the World Energy Council and member of the scientific board of Serbian Thermal engineering society. He is member of editorial boards of "Nuclear technology and Radiation Protection", "Technical Diagnostics" and several other journals and editor of several books and monographs. He was teaching postgraduate students at the universities of ex Yugoslavia.*



**Prof. dr Radivoje Mitrović** je dekan Mašinskog fakulteta u Beogradu. Posедуje višegodišnje iskustvo u oblastima mašinskih konstrukcija, ispitivanja kotrljajnih ležaja, upravljanja projektima, dizajna mašina, pouzdanosti mašinskih elemenata i sistema, trenja i vibracija kotrljajnih ležaja, proizvodnih tehnologija kotrljajnih ležaja. Autor je velikog broja radova i ekspertiza na polju ispitivanja, procene radnog veka i analize otkaza kotrljajnih ležaja i prenosnika snage, kao i unapređenja konstrukcionih rešenja sistema oslanjanja mašina, tehničkih propisa i standarda, Evropskih direktiva, upravljanja inženjerskim projektima. Realizator je ili rukovodilac 66 projekata saradnje sa privredom, kao i 21 projekta finansiranog od strane Ministarstva prosvete, nauke i tehnološkog razvoja Republike Srbije. Kao profesor i šef Katedre za opšte mašinske konstrukcije Mašinskog fakulteta Univerziteta u Beogradu, 2008. godine je osnovao i osavremenio laboratoriju LIMES (Laboratoriju za Ispitivanje Mašinskih Elemenata i Sistema). Laboratorija LIMES je 2009. godine akreditovana od strane Akreditacionog tela Srbije (ATS), po Evropskim standardima za ispitivanje kotrljajnih ležaja, prema metodama za merenje njihovih dimenzija, vibracija, radijalnog zazoru i tvrdoće.

*Prof. Radivoje Mitrovic, PhD is a dean of the Faculty of Mechanical Engineering in Belgrade. He is a specialist in the field of: Construction Engineering, Bearings testing, Plant design project management, Machine Design, Reliability of machine elements and systems, Friction and vibration of rolling bearing, rolling bearings manufacturing technology. He wrote many papers and expertise in field of bearings testing, bearings life estimation, failure analysis, as well as gearing and imbedding design upgrading and improving as well as in technical regulations and standards, EU directives, management of engineering projects. He is a manager and participant of 66 national projects for Serbian companies, as well as of 21 projects funded by Ministry of Education, Science and Technological Development of Republic of Serbia. As a professor and as a Chief of Machine Design Department, Faculty of Mechanical Engineering, University of Belgrade, he upgraded existent and established a new laboratory – LIMES (Laboratory for testing of Machine Elements and Systems). Laboratory is accredited by EU standards for rolling bearing test methods, such as: Dimension, Vibration, Radial clearing, Hardness, Residual magnetism etc.*



**Prof. dr Miloš J. Banjac**, redovni je profesor i šef Katedre ta termomehaniku, Mašinskom fakultetu Univerziteta u Beograd u, gostujući profesor na Arhitektonskom fakultetu i Fakultetu političkih nauka Univerziteta u Beogradu. Od 2010 - 2012 i od 2014. godine obavljaju funkciju pomoćnika ministra u Ministarstvu rudarstva i energetike Republike Srbije, gde je zadužen za oblast energetske efikasnosti, obnovljivih izvora energije, strateškog planiranja, uticaja energetskog sektora na klimatske promene i revitalizacije sistemima daljinskog grejanja. Autor i koautor više od 90 naučnih radova i rukovodioc nekoliko nacionalnih naučnih

i projekata tehnološkog razvoja, nacionalnih projekata u oblasti strateškog planiranja energetskog sektora, unapređenja energetske efikasnosti i korišćenja OIE i direktor velikih nacionalnih infrastrukturnih projekata, posebno revitalizacije sistema daljinskog grejanja u Srbiji. Predstavnik Republike Srbije i glavni pregovarač za obaveze Srbije u oblasti obnovljivih izvora energije u Energetskoj zajednici jugoistočne Evrope, zamenik predsednika Pregovaračke grupe za energetiku u procesu pristupanja Evropskoj uniji, predsedavajući Grupe eksperata za OIE UNECE Biroa. Autor srpskog Zakona o energetskej efikasnosti, jedan od autora srpskog Akcionog plana za obnovljive izvora energije i autor nekoliko zbirki zadataka i priručnika iz oblasti energetskog menadžmenta, termodinamike i prenošenja toplote i supstance i toplotnih pumpi. Recenzent međunarodnih naučnih časopisa: Energy and Buildings, KSCE Journal of Civil Engineering, Thermal Science i Energy Policy.

*Prof. Dr. Miloš J. Banjac is a full-time professor and a Head of Department of Thermodynamics, University of Belgrade, Faculty of Mechanical and Visiting Professor on Faculty of Architecture and Faculty of Political Science, University of Belgrade. In the same time, since from 2010 – 2012 and from 2014 is Assistant Minister in Ministry for Mining and Energy of Republic Serbia responsible for issues of energy efficiency, renewable energy sources, strategic planning, influence of energy sector on climate changing and revitalization of district heating systems in Serbia. Author and coauthor of more than 90 scientific works and team leader of few national scientific and technological development projects, general manager or director of big national strategic projects in area of energy strategic planning, improvement energy efficiency and using renewable energy sources and big infrastructure projects, especially revitalization of district heating system in Serbia. Representative of the Republic of Serbia and main negotiator for Serbia's obligations in the area of renewable energy sources in the Energy Community of Southeast Europe, Deputy President of the Negotiating Group for the energy in the process of accession to the European Union, Vice-Chair of the Bureau of the UNECE Group of Experts on Renewable Energy. Author of the Serbian Law of energy efficiency, one of authors of Serbian Renewable Energy Action Plan and author of few handbooks and manuals for energy management, thermodynamics, heat and mass transfer and heat pumps. Reviewer of International Scientific Journal Energy and Buildings, KSCE Journal of Civil Engineering, Thermal Science and Energy Policy.*



**Prof. Dr Dušan Gvozdenc** je profesor Univerziteta u Novom Sadu i konsultant na projektima iz oblasti energetike u više zemalja Evrope, Afrike i Dalekog, Srednjeg i Bliskog Istoka. Projekti su rađeni za Razvojni program Ujedinjenih nacija (UNDP), Organizacija ujedinjenih nacija za industrijski razvoj (UNIDO), nekoliko programa Evropske unije (EU), Nemačko udruženje za tehničku saradnju (GTZ) i dr. Za potrebe Vlade Republike Srbije i Pokrajine Vojvodina radio je više strateških dokumenata iz oblasti energetike. U periodu od 2002 do 2003 godine bio je prvi direktor Agencije za energetske efikasnost Vlade Republike Srbije, a zatim i direktor Pokrajinskog centra za energetske efikasnost u Novom Sadu (2003-2009). Autor je brojnih radova publikovanih u međunarodnim i domaćim časopisima, urednik je zbornika međunarodnih konferencija i autor je i nekoliko trening priručnika. Vodio je ili je bio član tima

u preko 200 energetske pregleda u industriji i zgradarstvu i time stekao bogato praktično iskustvo. Nedavno je objavio i knjige: Morvaj Z, Gvozdenc D: Applied energy and environmental management, John Wiley, 2008., Gvozdenc D, Kljajić M, Petrović J : Merenje i regulisanje u termoprocesnoj tehnici, FTN, 2009. i Gvozdenc, D., Kriogena tehnika, FTN, 2010.

*Prof. Dusan Gvozdenc, PhD is a professor at the University of Novi Sad and a consultant on projects in the energy sector in several countries of Europe, Africa and the Far, Middle and Near East. The projects were carried out for the United Nations Development Program (UNDP), United Nations Industrial Development Organization (UNIDO), several programs of the European Union (EU), German Association for Technical Cooperation (GTZ) and others. For the Government of the Republic of Serbia and Province of Vojvodina he worked more on numerous strategic documents in the field of energy. In the period 2002-2003 he was the first elected director of the Energy Efficiency Agency of the Republic of Serbia, and then the director of the Regional Center for Energy Efficiency in Novi Sad (2003-2009). He is the author of numerous papers published in international and national journals, editor of the proceedings of international conferences and is author of several training manuals. He has led or was a member of the team in more than 200 energy audits in industry and building and thus gained extensive practical experience. He recently published books: Morvaj Z, Gvozdenc D: Applied energy and environmental management, John Wiley, 2008, Gvozdenc D Kljajic M, Petrović J: Measurement and regulation in Thermal technology, FTN, 2009 and Gvozdenc, D., Cryogenic Technologies, FTN, 2010<sup>th</sup>*



**Prof. dr Trygve Magne Eikevik** redovan je profesor Norveškog univerziteta za nauku i tehnologiju (NTNU), na Fakultetu za inženjering u nauci i tehnologiji. Glavne oblasti njegovog interesovanja su tehnologije grejnih pumpi, energetska efikasnost u industriji, inženjering obrade hrane, grejne pumpe u kombinaciji sa sušarama. Pre karijere profesora na NTNU, radio je za SINTEF a učestvovao je i u osnivanju i upravljanju mnogobrojnih kompanije među kojima su i EnerDry International AS i DryTeam AS. Učesnik je u radu mnogih organizacija, na različitim pozicijama, uključujući IIP, ASHRAE, IIR, NKF. Dobitnik je TEKNA nagrade, WFCFD nagrade i drugih. Učestvovao je u radu mnogih nacionalnih i međunarodnih konferencija kao član programskog ili organizacionog odbora, a autor je preko 150 radova ili predavanja kako na nacionalnim tako i internacionalnim događajima.

*Prof. Trygve Magne Eikevik, PhD is a full time professor at the Norwegian University of Science and Technology (NTNU) Faculty of Engineering Science and Technology. His main fields of competence are Heat Pumping Technologies, Energy Efficiency in industry, Food Process Engineering and Heat Pumps in combination with Dryers. Before assuming the position of professor at NTNU he worked for SINTEF for many years, finally as senior adviser. He is a participant in work of many organizations, assuming different positions, including Commission C2 of IIR, ASHRAE (American Society of Heating, Refrigeration and Air-Conditioning Engineers, Inc.), IAR (International Institute of Ammonia Refrigeration), The Norwegian Society of Refrigeration (NKF). He is the winner of TEKNA Fagutvalgets Ærespris award, WFCFD Award and others. He established several companies in Norway among which are EnerDry International AS and DryTeam AS. He participated in many national and international conferences, either as member of the organizing or the scientific committee and he wrote more than 150 publications/lectures in both national and international conferences and seminars within his main fields of competence.*



**Prof. dr Kirshna Busawon** je profesor Upravljanja kontrolnim sistemima i šef istraživačke grupe za nelinearnu kontrolu na Fakultetu za inženjering i zaštitu životne sredine. Njegove oblasti interesovanja su matematičko modelovanje, nelinearna kontrola i osmatrački dizajn, detektovanje i izolacija grešaka sa primenom na različite inženjerske discipline kao što su mašinstvo, struja i biotehnoški sistemi. Skorija istraživanja fokusirani su na Compressive sensing, Chaos communications i hibridne sisteme. Godine 1989. Diplomirao je na Univerzitetu St-Etienne iz matematike i osnovnih nauka. Na Univerzitetu u Lionu je stekao BEng i MSc diplome za elektrotehniku, gde je nekoliko godina kasnije i doktorirao na temu Inženjeringa kontrolnih sistema. Nakon doktoriranja angažovan je kao istraživač saradnik na Simon Fraser Univerzitetu u Kanadi, nakon čega se pridružio Univerzitetu Nuevo Leon u

Meksiku gde je radio kao predavač na odeljenju za mašinstvo i elektrotehniku. Godine 2000. se pridružio Northumbria Univerzitetu gde je angažovan kao viši predavač u Školi informatike, inženjeringa i nauke, dok 2013. postaje profesor na istom univerzitetu.

*Prof. Krishna Busawon, PhD is currently a Professor in Control Systems Engineering and is currently the head of Nonlinear Control research group in the Faculty of Engineering and Environment. His research interests lie mainly in the areas of mathematical modeling, nonlinear control and observer design, fault detection and isolation with application to various engineering disciplines such as mechanical, power and biotechnological systems. Recent research interests are in compressive sensing, chaos communications and hybrid systems. In 1989, he obtained his first degree in Mathematics and Fundamental Sciences from University of St-Etienne. He then went to University of Lyon where he obtained his BEng and MSc Degree in Electrical Engineering in 1990 and 1991 respectively. He went on to continue his post-graduate studies in the same university and consequently obtained his MPhil and PhD degree in Control Systems Engineering in 1992 and 1996 respectively. After gaining a PhD he was appointed as Research Fellow at Simon Fraser University, Canada, in 1997. Following this, he joined the University of Nuevo León in Mexico where he worked as a Lecturer in the Department of Mechanical and Electrical Engineering (FIME). In the year 2000, he joined Northumbria University where he was appointed as a Senior Lecturer in the School of Computing, Engineering and Sciences. Later in 2008, he became a Reader in Control Systems Engineering and a Professor since February 2013 at the same university.*



**Prof. dr Vojislav Novaković** profesor je na Norveškom univerzitetu za nauku i tehnologiju, na odseku za energetiku i procesni inženjering, gde je takođe stekao PhD diplomu, nakon osnovnih i master studija na Mašinskom fakultetu Univerziteta u Beogradu. Glavne oblasti njegovog naučnog interesovanja obuhvataju Energetsku efikasnost i očuvanje energije u zgradama, Zgrade nulte emisije i energije, celovekovno održavanje zgrada i energetskih sistema u zgradama, matematičko modeliranje i simulaciju dinamike u kontrolnim KGH petljama, Izgradnju sistema za upravljanje energijom, unutrašnja sredina i kvalitet unutrašnjeg vazduha, Dizajn ventilacije, grejanje i hlađenje postrojenja u industrijske svrhe. Pre nego što je počeo karijeru na NTNU radio je kao inženjer konsultant pri konsultantskoj grupi "Zavarivač", kao naučni savetnik na SINTEFu o predavač na Norveškom institutu za

tehnologiju. Deo je mnogobrojnih projekata, programa ili naučnih organizacija kao član, vođa, savetnik ili predstavnik, među kojima su REHVA edukacioni odbor, IEA program za energetsku efikasnost u zajednicama i zgradarstvu, IBPSA, ZEB, HERD Energy, INTPART. Tokom svoje karijere osvojio je brojne nagrade za svoja naučna i profesionalna ostvarenja, među kojima su REHVA nagrada za izvanredna dostignuća u nauci i za unapređenje energetske efikasnosti i unutrašnje sredine zgrada, ASHRAE, sertifikat Skandinavske federacije HVAC asocijacija. Autor je brojnih radova objavljenih u časopisima, zbornicima radova međunarodnih konferencija i drugim naučnim kanalima.

*Prof. Vojislav Novaković, PhD, is a professor at the Norwegian University of Science and Technology (NTNU), Department of Energy and Process Engineering, where he also gained his PhD diploma, after graduation and master studies completed at the Faculty of Mechanical Engineering, University of Belgrade, Serbia. His main fields of interest are Energy efficiency and energy conservation in buildings, Zero energy and emission buildings, Life-time commissioning of buildings and building services systems, Mathematical modeling and simulation of dynamics in HVAC control loops, Building energy management systems, Indoor environment and indoor air quality, Design of ventilating, heating and cooling plants for industrial purposes. Before his career at the NTNU he was a consulting engineer at the Consulting Group "Zavarivac", scientific adviser at SINTEF Energy Research and lecturer at the Norwegian Institute of Technology. He is currently involved with as member, leader, adviser or representative in REHVA Educational committee, IEA - Programme for Energy Efficiency in Communities and Buildings, International Building Performance Simulation Association (IBPSA), Centre for Environment-friendly Energy Research: Zero Emission Buildings (ZEB), The collaborative project inside HERD Energy, International partnerships for excellent education and research (INTPART). During his career he won*

numerous awards for his professional and scientific achievements, some of them being the REHVA Professional Award for outstanding achievements in science and the improvements of energy efficiency and the indoor environment of buildings, ASHRAE Fellow, Scandinavian Federation of HVAC Associations: Certificate of Appreciation for leadership in organizing Cold Climate HVAC. He wrote numerous papers published in accepted journals, conference proceedings of international conferences, and other scientific channels.



**Prof. dr Branislav Živković**, školovan na Mašinskom fakultetu Univerziteta u Beogradu, profesor je istog fakulteta, na Katedri za termotehniku, gde drži nastavu iz predmeta Osnove tehnike klimatizacije i Sistemi ventilacije i klimatizacije, Energetska efikasnost u zgradama i Solarni sistemi, a za strane studente više predmeta iz oblasti termotehnike na engleskom jeziku. Autor je preko 70 radova u naučnim i stručnim časopisima i zbornicima radova sa međunarodnih i domaćih kongresa i konferencija. Iza sebe ima preko 70 istraživačkih projekta i glavnih mašinskih projekta termotehničkih instalacija (stambeni objekti, poslovne zgrade, škole, bolnice, fabrike – uglavnom u konditorskoj i farmaceutskoj industriji). Izveo je dosta različitih ekspertiza, i studija, i napisao mnogobrojne izveštaje i revizije projektne dokumentacije. Vršio je merenja protoka ventilacionih i klimatizacionih sistema i stekao iskustvo u balansiranju KGH sistema i merenju toplotnog učinka grejnih tela (oko 40 izveštaja). Dobitnik je plakete KGH i specijalne plakete Mašinskog fakulteta. Član je sledećih organizacije: IIR (International Institute of Refrigeration) – Međunarodni institut za hlađenje – član Komisije E1 – Klimatizacija; SMEITS (Savez mašinskih i elektrotehničkih inženjera i tehničara Srbije) – Društvo za KGH (grejanje, hlađenje i klimatizaciju); Inženjerska komora Srbije

*Prof. Branislav Živkovic, PhD is a professor at the Faculty of Mechanical Engineering, where he also completed his studies, at the Department of Thermal Engineering, where he now lectures the Basic techniques of air conditioning and Ventilation systems and air conditioning systems, Energy efficiency in buildings and Solar systems, and also some subjects within thermodynamics in English, for foreign students. He has authored over 70 papers in scientific journals and proceedings of international and national congresses and conferences. He has more than 70 research projects and major mechanical engineering projects of HVAC installations behind him (residential buildings, commercial buildings, schools, hospitals, factories - mainly in confectionery and pharmaceutical industries). He has performed various expertise and studies, and written numerous reports and audits of project documentation, gained significant experience in flow measurements of ventilations and air conditioning systems, balances of HVAC systems, measurements of thermal effects of heating units (40 reports). He is also a winner of the HVAC plaque and a special plaque of the Faculty of Mechanical Engineering. He is a member of the following organizations: IIR (International Institute of Refrigeration) - International Institute of Refrigeration - Member of the Commission E1 - Air conditioning; Solidification (Association of Mechanical and Electrical Engineers of Serbia) - Society for HVAC (heating, ventilation and air conditioning); Engineers of Serbia*



**Prof. dr Aleksandar Jovović** je redovni profesor na Mašinskom fakultetu Univerziteta u Beogradu, na kom se takođe i školovao, na katedri za procesnu tehniku. Oblasti kojima se bavi u svom istraživačkom radu obuhvataju procesnu tehniku, procese i opremu za preradu vode, sušare, visokotemperaturske procese, emisiju zagađujućih komponenata u otpadnim gasovima, upravljanje otpadom: termički tretman otpada i kontrola emisije. Autor je više od 50 radova na domaćim i međunarodnim skupovima/časopisima. Objavio je jednu monografiju od međunarodnog značaja, dva poglavlja u monografiji međunarodnog značaja, i pet poglavlja u monografijama nacionalnog značaja. Dobitnik je nagrade Privredne komore grada Beograda za 2002. godinu. Predavač je u okviru Alternativne akademske obrazovne mreže u Beogradu (AAEN), na tri predmeta programa Zaštita životne sredine - izazov za nauku, tehnologiju i društvo. Član je ekspertske radne grupe za otpad Ministarstva za nauku, tehnologiju i zaštitu životne sredine Republike Srbije i Predsednik Komisije za jugoslovenske standarde u oblasti upravljanja otpadom.

*Prof. Aleksandar Jovovic, PhD is a professor at the Faculty of Mechanical Engineering, University of Belgrade, to whom also his education, the Department of Process Engineering. The authorities dealt with in his research include process engineering, processes and equipment for water treatment, drying, high temperature processes, emissions of polluting components in the waste gases, waste management: thermal treatment of waste and controlling emissions. He has written over 50 papers at national and international conferences / journals. He published a monograph of the international importance, two chapters in the monograph of international importance, and five chapters in the monographs of national importance. He was awarded the Chamber of Commerce of Belgrade in 2002. Lecturer within the Alternative Academic Educational Network in Belgrade (AAEN), in three cases the program Environmental protection - Challenge for Science, Technology and Society. He is a member of the Expert Working Group on Waste Ministry of Science, Technology and Environment of the Republic of Serbia and President of the Commission for the Yugoslav standards in the area of waste management.*



**Prof. dr Milutin Jovanovic** deo je Northumbria Univerziteta od 2001, gde je trenutno na poziciji docenta za elektrodistribuciju. Diplomirao je na Univerzitetu u Beogradu a doktorirao na Univerzitetu u Newcastle, Australija, sve u oblasti elektrotehnike. Na početku karijere radio je kao predavač na Elektrotehničkom fakultetu u Beogradu, nakon čega je prešao na fakultet u Njukaslu, gde je pored završavanja studija radio kao viši istraživač saradnik. Nakon Njukasla se pridružio Školi za inženjering pri Univerzitetu Liverpoola John Moore kao predavač za Upravljanje električnom energijom. Glavne oblasti njegovog rada su primena električnih mašina i drajvera i sistemi konverzije energije vetra.

*Prof. Milutin Jovanovic, PhD, has been with the Faculty of Engineering and Environment of Northumbria University at Newcastle since 2001, first as a senior lecturer and currently as a reader in power engineering. He received the BEng and MEng degrees from the University of Belgrade and the Ph.D. degree from the University of Newcastle, Australia, all in electrical engineering. From 1987-1992 he was a Lecturer in power converters and drives in the Department of Electrical Engineering of the University of Belgrade. From 1992 to 1997 he was with the School of Electrical and Computer Engineering of the University of Newcastle, Australia, where he also completed his PhD studies on sensor-less control of synchronous reluctance machines, to be subsequently employed there as a Senior Research Associate. He joined the School of Engineering of Liverpool John Moores University in 1998 as a Lecturer in Power Engineering. The main areas of his expertise are applications of electrical machines & drives and wind energy conversion systems.*



**Prof. dr Ana Stankovic** je profesor na Univerzitetu države Klivlend, SAD na odeljenju za Elektrotehniku i informatiku. Doktorirala je na Univerzitetu Viskonsin Madison, dok je prethodno školovanje bilo pri Univerzitetu u Beogradu. Na početku karijere radila je na Institutu Nikola Tesla kao projektant. Na Univerzitetu u Klivlendu je razvila odeljenje za Elektrotehniku i informatiku. Njeno istraživanje usmereno je na energetske elektrone i električne mašine i pogone. Razvila je nove metode za unapređenje kvaliteta električne energije kroz mrežno povezane električne konvertere u uslovima neuravnoteženih operativnih uslova elektrodistributivnog sistema. Njene oblasti interesovanja takođe su i obnovljivi izvori energije. Recenzent je brojnih časopisa i naučnih radova pisanih za konferencije poput IEEE Transactions on Energy Conversion, IET on Power Electronics, itd. Bila je član programskog odbora IEEE Energy Tech Conference i predsednik jedne od sesija pri konferencijama IEEE Applied Power Electronics i IEEE Power Electronics Specialist. Dobitnik je brojnih nagrada Univerziteta u Klivlendu.

*Prof. Ana Stankovic, PhD joined the Electrical and Computer Engineering Department at Cleveland State University in June 1999. In 2005 she was promoted to an Associate Professor with tenure. In August 2012, she was promoted to the rank of Full Professor. She received her Ph.D. in electrical and computer engineering from the University of Wisconsin-Madison in 1998, M.S. from the University of Belgrade, Serbia and B.S from the University of Belgrade, Serbia. Prior to her graduate studies she worked eight years as a design engineer in the Nikola Tesla Research Institute in Belgrade, Serbia. She has developed the power program in the department of Electrical and Computer Engineering at Cleveland State University. Her research has focused on power electronics and electric machines and drives. She has published novel methods to improve the power quality of the grid-connected power electronics converters under unbalanced operating conditions in the power system. Her research interests also include renewable energy technologies. She has conducted technical reviews of numerous journal and conference papers, some of which are IEEE Transactions on Energy Conversion, IET on Power Electronics etc. as well as number of IEEE and ASEE Conferences. She has served on the Program Committee of the IEEE Energy Tech Conference and as session chair on the IEEE Applied Power Electronics (APEC) Conference and IEEE Power Electronics Specialist Conference (PESC). She received a Faculty Merit Award in 2006, 2012 and 2013. In 2008, she also received a Faculty Merit Award for the development of research and instructional laboratory at Cleveland State University.*



**Prof. dr Dragoslava D. Stojiljković**, redovni je profesor na katedri za tehnologiju materijala Mašinskog fakulteta u Beogradu. Svoje celokupno školovanje takođe je završila pri Mašinskom fakultetu u Beogradu. Oblasti njenog istraživanja obuhvataju sledeće kategorije: Tehnologija materijala – Pogonski materijali i Sagorevanje Pogonski materijali, Sagorevanje, Čvrsta biomasa, Tečna biogoriva, zaštita životne sredine, emisija toksičnih komponenti iz procesa sagorevanja. Rukovodilac je 6 projekata finansiranih od MPNTR, uzela je učešće u 2 EUREKA projekta, a iza sebe ima preko 70 naučnih i stručnih radova na domaćim i međunarodnim skupovima i u časopisima, 3 monografije i više od 300 studija, projekata i elaborata o ispitivanju. Član je DTS – Društva termičara Srbije, kao podpredsednik društva i Komisije za donošenje standarda iz oblasti naftnog porekla – Institut za standardizaciju Srbije, kao i Stručnog saveta Jugoslovenskog društva za naftu i gas.

*Prof. Dragoslav D. Stojiljkovic, PhD is a full professor at the Department of Materials Technology, Faculty of Mechanical Engineering in Belgrade. Her overall education was also completed at the Faculty of Mechanical Engineering in Belgrade. The areas of her research include the following categories: Technology materials - Operating Materials and Combustion Drive materials, combustion, solid biomass, liquid biofuels, environmental protection, emission of toxic fumes from the combustion process. She was the head of 6 projects financed by MoESTD, took part in two EUREKA projects, and she authored over 70 scientific papers in national and international conferences and in journals, 3 monographs and more than 300 studies, projects and surveys on testing. She is a member of the Society of Thermal Engineers of Serbia, as vice president of the society and also of the Commission for the adoption of standards in the field of petroleum origin - Institute for standardization of Serbia, as well as the Expert Council of the Yugoslav society for oil and gas.*



**Doc. dr. Jasmina Madžgalj**, Uprava grada Beograda, diplomirala je na filološkom fakultetu Univerziteta u Beogradu, magistrirala na Fakultetu za zaštitu na radu pri Univerzitetu u Nišu i najzad odbranila doktorski rad FMMSU u Beogradu, Privredna akademija Novi Sad, u oblasti ekološki menadžment / održivi razvoj i zelena ekonomija i obrazovanje. Napisala je preko 50 naučnih i stručnih radova i radila na mnogobrojnim međunarodnim projektima iz oblasti ekologije, energetike, klimatskih promena. Oficijelni je i stručni učesnik na izradi strateških dokumentima za - Akcioni plan adaptacije na klimatske promene sa procenom ranjivosti, Program zaštite životne sredine za grad Beograd, Plan kvaliteta vazduha za grad Beograd, itd. Posедуje Horaise 2020 licencu i međunarodni je ekspert iz oblasti ekologije, edukacije, energetskog menadžmenta i ekoturizma. Dr Madžgalj poseduje i više sertifikata iz oblasti bezbednosti zdravlja i životne sredine kao i radne okoline. Objavila je naučne radove u vodećim nacionalnim i međunarodnim stručnim časopisima. Dobitnik je većeg broja priznanja za doprinos nauci i obrazovanju.

*Dr Jasmina Madžgalj, Belgrade City Government, graduated from the Faculty of Philology of Belgrade University, gained her master's degree at the Faculty of safety and health at work at the University of Nis and finally completed a PhD at FMMSU in Belgrade, Serbian Academy of Novi Sad, in the field of environmental management / sustainable development and green economy and education. She has written more than 50 papers and worked on many international projects in the field of ecology, energy, and climate change. Official participant and an expert in development of strategic documents - Action Plan for Adaptation to Climate Change with the estimate of vulnerability, Environmental protection program for the city of Belgrade, Air Quality Plan for the city of Belgrade, etc. She is the holder of Horaiso 2020 license and an international expert in the field of ecology, education, energy management and ecotourism. Dr Madžgalj possesses many certificates in the field of safety and health of the environment and working environment. She published scientific papers in leading national and international journals. She won many major awards for her contribution to science and education.*

## SATNICA / SCHEDULE

### Sreda, 21. jun 2017 / Wednesday, June 21, 2017

- 15:00-20:00 REGISTRACIJA / REGISTRATION
- 16:00-16:30 SVEČANO OTVARANJE / OPENING CEREMONY  
POZDRAVNI GOVORI / GREETINGS:  
**Prof. dr Milan RADOVANOVIĆ, predsednik Društva termičara Srbije / president of the Serbian Society of Thermal Engineers**  
**Prof. dr Goran JANKES, predsednik Organizacionog odbora / president of the Organizing Committee**  
**Privredna komora Srbije / Serbian Chambers of Commerce**  
ZVANIČNO OTVARANJE / OFFICIAL OPENING:  
**Ministar za energetiku Republike Srbije / Minister of energy of the Republic of Serbia**
- 16:30-17:00 **ALARMANTNOST I SKEPTICIZAM NA TEMU KLIMATSKIH PROMENA IZ UGLA INDUSTRIJSKOG RAZVOJA / ALARMISM AND SCEPTICISM ON CLIMATE CHANGE FROM AN INDUSTRIAL DEVELOPMENT PERSPECTIVE**  
Miodrag M. MESAROVIĆ, Energoprojekt Entel, Belgrade, Serbia
- 17:00-17:30 **USPOSTAVLJANJE SISTEMA ENERGETSKOG MENADŽMENTA U REPUBLICI SRBIJI - OSTVARENI REZULTATI I BUDUĆI KORACI / ESTABLISHMENT OF THE ENERGY MANAGEMENT SYSTEM IN THE REPUBLIC OF SERBIA - ACHIEVED RESULTS AND FUTURE STEPS**  
Miloš BANJAC, Ministry of Mining and Energy, Republic of Serbia, Mirjana Laković, University of Nis, Faculty of Mechanical Engineering, Serbia
- 17:30-18:00 **INOVATIVNA INDUSTRIJA - POTENCIJAL RAZVOJA INDUSTRIJE U SRBIJI / INNOVATION INDUSTRY - INDUSTRY DEVELOPMENT POTENTIAL IN SERBIA**  
Radivoje MITROVIĆ, Faculty of Mechanical Engineering in Belgrade, Serbia
- 18:00 **PREZENTACIJA SPONZORA / PRESENTATION OF SPONSOR - SIEMENS**
- 19:00 KOKTEL DOBRODOŠLICE / WELCOME COCKTAIL

### Četvrtak, 22. jun 2017 / Thursday, June 22, 2017

- 09:00-10:30 **Energetska politika, zakonodavstvo i podsticajni elementi**  
**Energy policy, legislature and incentives**
- 10:30-11:00 KAFE PAUZA / COFFEE BREAK

- 11:00-13:00 *Energetska politika, zakonodavstvo i podsticajni elementi*  
*Energy policy, legislature and incentives*
- 13:00-14:30 RUČAK / LUNCH
- 14:30-16:00 *Energetska efikasnost i energetske menadžment u industriji*  
*Energy efficiency and energy management within industry*
- 16:00-16:15 KAFE PAUZA / COFFEE BREAK
- 16:15-17:00 PREZENTACIJA SPONZORA / PRESENTATION OF SPONSOR - **GRUNDFOS** 
- 17:00-19:00 *Energetska efikasnost i energetske menadžment u industriji*  
*Energy efficiency and energy management within industry*

**Petak, 23. jun 2017 / Friday, June 23, 2017**

- 09:00-10:50 *Energetska efikasnost i energetske menadžment u zgradarstvu*  
*Energy efficiency and energy management within building*
- 10:50-11:10 KAFE PAUZA / COFFEE BREAK
- 11:10-12:40 *Energetska efikasnost i energetske menadžment – snabdevanje energijom*  
*Energy efficiency and energy management – energy supply*
- 12:40-14:00 RUČAK / LUNCH
- 14:00-15:30 *Zaštita životne sredine i održivi razvoj*  
*Environmental protection and sustainable development*
- 15:30-15:50 KAFE PAUZA / COFFEE BREAK
- 15:50-16:50 *Zaštita životne sredine i održivi razvoj*  
*Environmental protection and sustainable development*
- 16:50-17:00 PAUZA / BREAK
- 17:00-18:50 *Pumpe i pumpni sistemi - Primeri dobre prakse i izvedenih rešenja povećanja energetske efikasnosti*  
*Pump units and systems - Good practice and solutions for increasing energy efficiency*
- Moderatori / Moderators:** doc. dr Đorđe Čantrak, Faculty of Mechanical Engineering, University of Belgrade, doc. dr Slobodan Tašin, Faculty of Technical Sciences, University of Novi Sad, doc. dr Živojin Stamenković, Faculty of Mechanical Engineering, University of Belgrade
- 18:50-19:20 *Posebna sesija – obrazovanje*  
*Special session – education*
- 19:20-19:30 PAUZA / BREAK
- 19:30-20:30 *Posebna sesija – primeri dobre prakse i izvedenih rešenja povećanja EE i primene novih izvora energije*  
*Special session – good practice and applied solutions examples for EE and new energy sources*
- 21:00 SVEČANA VEČERA / DINNER CEREMONY

**Subota, 24. jun 2017 / Saturday, June 24, 2017**

- 09:00-10:40 *Korišćenje obnovljivih izvora energije*  
*The use of renewable energy sources*
- 10:40-11:00 KAFE PAUZA / COFFEE BREAK
- 11:00-13:30 *Problemi primene biomase – okrugli sto, prezentacije radova i diskusija*  
*Issues of biomass application – round table, paper presentations and discussion*
- 13:30-13:40 PAUZA / BREAK
- 13:40 ZATVARANJE KONFERENCIJE – ZAKLJUČCI / CLOSING CEREMONY – CONCLUSIONS
- 14:00 RUČAK / LUNCH

## OSNOVNI CILJEVI IEEP-a 2017 / BASIC GOALS OF IEEP '17

- Sagledavanje postojećeg stanja u tehničkom, tehnološkom, organizacionom i ekološkom smislu
- Analiza aktuelnih problema sa osvrtom na postojeću zakonsku i tehničku regulativu u Regionu u poređenju sa uslovima EU
- Pogled u budućnost - Pravci razvoja industrijske energetike sa osvrtom na najnovije smernice Evropske komisije
- Prikaz projekata smanjenja potrošnje energije i zaštite životne sredine
- Donošenje zaključaka Konferencije
- Publishing conference conclusions
- Evaluation of the existent practice from technological, technical, managerial and ecological point of view
- Analysis of the current problems with the consideration of existent legal and technical regulations in the specific areas in comparison to EU
- View to the future - Industrial energy progress directions with respect to the newest European Commission directives
- Demonstration of energy reducing and environmental protection projects

## OSNOVNI SADRŽAJI IEEP-a 2017 / BASIC CONTENTS OF IEEP '17

- Naučno-stručni sadržaj: teme od posebnog naučnog i stručnog interesa
- Prateći stručni programi: stručni i poslovni razgovori, okrugli sto
- Prateći komercijalni programi: izložba, poslovne prezentacije, oglasni panoji - promocije i prezentacije opreme, proizvoda, aplikativnog softvera, publikacija
- Društveni program: koktel, banket, poslovni ručkovi, večere i kokteli koji omogućuju upoznavanje i zbližavanje učesnika
- Promocije obuhvataju sve aktivnosti koje svojim porukama i rezultatima povećavaju interesovanje za teme konferencije i stvaraju atmosferu u kojoj se donose odluke o učešću, odnosno potrebi angažovanja na konferenciji
- Scientific content: subjects of special scientific and professional interest
- Side scientific content: professional and business discussions, round tables etc.
- Side commercial program, exhibition, business presentations, advertising panels promotions and presentation of equipment, products, hardware, software, publications
- Social program: cocktails, banquet, business lunches and dinners, organized with the aim of enabling networking among participants
- Promotion includes all activities which would increase the interest in the Conference and create atmosphere fertile for decision making targeted at the participation or engagement in the conference

## TEMATSKÉ CELINE / SUBJECT AREAS

### 1. Energetska politika, zakonodavstvo i podsticaji

- Energetska politika zemalja regiona
- Nacionalni i regionalni programi energetske efikasnosti
- Podsticajne mere za unapređenje energetske efikasnosti
- Modeli finansiranja energetske efikasnosti
- Zakonska regulativa

### 2. Energetska efikasnost i energetska menadžment u industriji i zgradarstvu

- Energetska efikasnost i održivi razvoj industrijskih preduzeća
- Energetski efikasne tehnologije
- Problemi i mogućnosti korišćenja kogeneracije i trigeneracije
- Korišćenje otpadne toplote i otpadnih materijala
- Revitalizacija tehnoloških energetske sistema u industrijskim preduzećima
- Programi energetske menadžmenta
- Analize stanja i metode optimizacije u industrijskoj energetici
- Merenje, upravljanje i vizuelizacija procesa

### 3. Zaštita životne sredine i održivi razvoj

- Zaštita vazduha, vode i tla i održivi razvoj industrijskih preduzeća
- Tretman i korišćenje otpadnih materijala
- Studije uticaja na životnu sredinu, IPPC preporuke, BAT i BREF (najbolje raspoložive tehnologije)
- Primena međunarodnih standarda
- Aktivnosti i inicijative u svetlu borbe protiv klimatskih promena
- Koncepti i projekti čistije proizvodnje
- Primena analiza životnog veka proizvoda

### 4. Korišćenje obnovljivih izvora energije

- Korišćenje obnovljivih izvora energije
- Korišćenje otpadnih materija kao goriva u industriji
- Korišćenje lokalnih goriva
- Zamena goriva i korišćenje alternativnih goriva

### 5. Posebne sesije

5a. Primeri dobre prakse i izvedenih rešenja povećanja EE i primene novih izvora energije

5b. Unapređenje obrazovanja u energetici i zaštiti životne sredine

### 1. Energy Policy, Legislature and Incentives

- Energy Policy of the Countries in the Region
- National Regional Programs for Energy Efficiency
- Incentive Measures for Improvement of Energy Efficiency
- Financing Models of Energy Efficiency
- Law Regulations

### 2. Energy efficiency and energy management within industry and building

- Energy efficiency and sustainable development of industrial enterprises
- Energy-efficient technologies
- Problems and possibilities of co-generation and tri-generation usage
- The use of waste heat and waste materials
- Revitalization of technological energy systems in industrial companies
- Energy Management Programs
- The situation analysis and optimization methods in industrial energy

Measurement, control and process visualization

### 3. Environmental Protection and Sustainable Development

- Protection of air, water and soil and sustainable development of industrial enterprises
- Treatment and Use of Waste Materials
- Environment Impact Studies, IPPC, BAT and BREF (best available technologies)
- Implementation of International Standards
- Activities and initiatives under the light of climate changes struggle
- Concepts and Projects of Cleaner Production
- Implementation of Analysis of Product Life Cycle

### 4. The use of renewable energy sources

- The use of renewable energy sources
- Using waste as fuel in industry
- The use of local fuels
- Replacing the fuel and the use of alternative fuels

### 5. Special Sessions

5a. Examples of good practices and existing solutions to increase EE and application of renewable energy sources

5b. Improving education in energy and environment

## PRELIMINARNI PROGRAM / PRELIMINARY PROGRAM

**Sreda, 21. jun 2017 / Wednesday, June 21, 2017**

- 15:00-20:00 REGISTRACIJA / REGISTRATION
- 16:00-16:30 SVEČANO OTVARANJE / OPENING CEREMONY  
POZDRAVNI GOVORI / GREETINGS:  
**Prof. dr Milan RADOVANOVIĆ, predsednik Društva termičara Srbije / president of the Serbian Society of Thermal Engineers**  
**Prof. dr Goran JANKES, predsednik Organizacionog odbora / president of the Organizing Committee**  
**Privredna komora Srbije / Serbian Chambers of Commerce**  
ZVANIČNO OTVARANJE / OFFICIAL OPENING:  
**Ministar za energetiku Republike Srbije / Minister of energy of the Republic of Serbia**
- 16:30-17:00 **ALARMANTNOST I SKEPTICIZAM NA TEMU KLIMATSKIH PROMENA IZ UGLA INDUSTRIJSKOG RAZVOJA / ALARMISM AND SCEPTICISM ON CLIMATE CHANGE FROM AN INDUSTRIAL DEVELOPMENT PERSPECTIVE**  
Miodrag M. MESAROVIĆ, Energoprojekt Entel, Belgrade, Serbia
- 17:00-17:30 **USPOSTAVLJANJE SISTEMA ENERGETSKOG MENADŽMENTA U REPUBLICI SRBIJI - OSTVARENI REZULTATI I BUDUĆI KORACI / ESTABLISHING ENERGY MANAGEMENT SYSTEM IN THE REPUBLIC OF SERBIA – RESULTS AND FUTURE STEPS**  
Miloš BANJAC, Ministry of Mining and Energy, Republic of Serbia, Mirjana Laković, University of Nis, Faculty of Mechanical Engineering, Serbia
- 17:30-18:00 **INOVATIVNA INDUSTRIJA - POTENCIJAL RAZVOJA INDUSTRIJE U SRBIJI / INNOVATION INDUSTRY - INDUSTRY DEVELOPMENT POTENTIAL IN SERBIA**  
Radivoje MITROVIĆ, Faculty of Mechanical Engineering in Belgrade, Serbia
- 18:00 **PREZENTACIJA SPONZORA / PRESENTATION OF SPONSOR - **
- 19:00 KOKTEL DOBRODOŠLICE / WELCOME COCKTAIL

**Četvrtak, 22. jun 2017 / Thursday, June 22, 2017**

- 09:00-10:30 ***Energetska politika, zakonodavstvo i podsticajni elementi***  
***Energy policy, legislature and incentives***  
UVODNA IZLAGANJA (u trajanju od po 30 minuta, sa uključenom diskusijom) / INTRODUCTORY LECTURES (30 minutes per lecture, discussion included):  
**PRAVCI RAZVOJA SISTEMA DALJINSKOG GREJANJA U SRBIJI**  
**DEVELOPMENT FLOW OF REMOTE HEATING SYSTEMS IN SERBIA**  
Zoran PREDIĆ, Ministry of mining and energy of the Republic of Serbia, Serbia  
**EFIKASNO KORIŠĆENJE PRIRODNIH RESURSA I ODRŽIVI RAZVOJ**  
**EFFICIENT USE OF NATURAL RESOURCES AND SUSTAINABLE DEVELOPMENT**  
Dušan GVOZDENAC, University in Novi Sad, Faculty of Technical Sciences, Serbia  
**OSNOVNI PROBLEMI ZAŠTITE ŽIVOTNE SREDINE U INDUSTRIJI BEOGRADA**  
**THE MAIN ENVIRONMENTAL PROBLEMS IN THE INDUSTRY OF BELGRADE**  
Jasmina MADZGALJ, Snežana GLUMAC, Secretariat for Environmental Protection, Belgrade, Serbia
- 10:30-11:00 KAFE PAUZA / COFFEE BREAK

Četvrtak, 22. jun 2017 / Thursday, June 22, 2017

11:00-13:00 *Energetska politika, zakonodavstvo i podsticajni elementi*  
*Energy policy, legislature and incentives*

UVODNA IZLAGANJA (u trajanju od po 30 minuta, sa uključenom diskusijom) / INTRODUCTORY LECTURES (30 minutes per lecture, discussion included):

**KOMERCIJALNE I NOVE ENERGETSKI EFIKASNE TEHNOLOGIJE ZA GENERATORE U MW VETRO TURBINAMA**

**COMMERCIAL AND EMERGING ENERGY-EFFICIENT GENERATOR TECHNOLOGIES FOR MW WIND TURBINES**

Milutin JOVANOVIĆ, Northumbria University, United Kingdom

**PODRŠKA RAZVOJU TRŽIŠTA BIOMASE U SRBIJI**

**SUPPORT TO THE BIOMASS MARKET DEVELOPMENT IN SERBIA**

Maja MATEJIĆ, United Nations Development Programme, Serbia

**AKTIVNOSTI PKS NA UNAPREĐENJU EE U INDUSTRIJI I NA ŠIRENJU PRIMENE OIE**

**ACTIVITIES OF THE SCC ON THE PROMOTION OF EE WITHIN INDUSTRY AND EXPANSION OF RES USE**

Miroslav LUTOVAC, Serbian Chambers of Commerce, Serbia

PREZENTACIJE RADOVA (u trajanju od po 10 minuta) / PAPER PRESENTATIONS (10 minutes per lecture, discussion included):

**MOGUĆNOSTI KORIŠĆENJA OBNOVLJIVIH IZVORA ENERGIJE U CRNOJ GORI**

**POSSIBILITY OF USE OF RENEWABLE ENERGY SOURCES IN MONTENEGRO**

Sreten ŠKULETIĆ, University of Montenegro, Faculty of Electrical Engineering, Montenegro

**METODOLOGIJA ZA ODREĐIVANJE CENE TOPLLOTNE ENERGIJE I KORIŠĆENJE BIOMASE U SISTEMIMA DALJINSKOG GREJANJA REPUBLIKE SRBIJE**

**METHODOLOGY FOR DEFINING THE PRICE OF THERMAL ENERGY AND USE OF BIOMASS IN REMOTE HEATING SYSTEMS OF THE REPUBLIC OF SERBIA**

Dejan STOJANOVIĆ, Energy Agency of the Republic of Serbia, Serbia

**PATENTNO PRAVO U EVROPI**

**PATENT LITIGATION IN EUROPE**

Jelena POPOVIĆ, Intellectual Property Office of the Republic of Serbia, Serbia

13:00-14:30 RUČAK / LUNCH

14:30-16:00 *Energetska efikasnost i energetska menadžment u industriji*  
*Energy efficiency and energy management within industry*

UVODNA IZLAGANJA (u trajanju od po 30 minuta, sa uključenom diskusijom) / INTRODUCTORY LECTURES (30 minutes per lecture, discussion included):

**RAZVOJ I PRIMENA VISOKOTEMPERATURNIH TOPLLOTNIH PUMPI U INDUSTRIJI**

**DEVELOPMENT AND APPLICATION OF HIGH TEMPERATURE HEAT PUMPS IN INDUSTRY**

Trygve MAGNE EIKEVIK, Norwegian University of Science and Technology, Norway

**IZAZOVI U OBLASTI ENERGETSKE EFIKASNOSTI U INDUSTRIJSKOM SEKTORU SRBIJE**

**ENERGY EFFICIENCY CHALLENGES IN SERBIAN INDUSTRIAL SECTOR**

Mirjana STAMENIĆ, Goran JANKES, Faculty of Mechanical Engineering in Belgrade, Serbia

**O SIMETRIČNIM KOMPONENTAMA TROFAZNIH SISTEMA**

**ON THE SYMMETRICAL COMPONENTS OF 3 PHASE SYSTEMS**

Krishna BUSAWON, Northumbria University, United Kingdom

16:00-16:15 KAFE PAUZA / COFFEE BREAK

16:15-17:00 PREZENTACIJA SPONZORA / PRESENTATION OF SPONSOR - **GRUNDFOS** 

17:00-19:00 **Energetska efikasnost i energetska menadžment u industriji**  
**Energy efficiency and energy management within industry**

UVODNA IZLAGANJA (u trajanju od po 30 minuta, sa uključenom diskusijom) / INTRODUCTORY LECTURES (30 minutes per lecture, discussion included):

**ENERGETSKA EFIKASNOST I KLASTERIZACIJA**  
**ENERGY EFFICIENCY AND CLASTERIZATION**

Zoltan ZAVARGO, Faculty of technology, Novi Sad, Serbia

PREZENTACIJE RADOVA (u trajanju od po 10 minuta, sa diskusijom uključenom) / PAPER PRESENTATIONS (10 minutes per lecture, discussion included):

**PROJEKTOVANJE SISTEMA ZA POVEĆANJE ENERGETSKE EFIKASNOSTI U FABRICI ZA PROIZVODNJU AMBALAŽE OD PLASTIČNIH MASA**  
**DESIGNING OF SYSTEM FOR INCREASE ENERGY EFFICIENCY IN THE FACTORY TO PRODUCE PLASTICS PACKAGING**

Đura OROS, Veran VASIĆ, Filip KULIĆ, Velimir ČONGRADAC, Faculty of Technical Sciences, Serbia

**PRIMENA KOMPOZITA NA OSNOVU POLIMERNIH MREŽA KOD ADSORPCIONIH SISTEMA**  
**THE USE OF POLYMER NETWORK COMPOSITES FOR ADSORPTION SYSTEMS**

Jelena TANASIĆ, Vesna TEOFILOVIĆ, Ayse AROGUZ, Jelena PAVLIČEVIĆ, Marija RADOJKOVIĆ, Mirjana JOVIČIĆ, Jaroslava BUDINSKI-SIMENDIĆ, University of Novi Sad, Faculty of Tehnology, Serbia

**MONITORING PROCESA SUŠENJA U INDUSTRIJI OPEKARSKIH PROIZVODA**  
**MONITORING OF DRYING PROCESS IN THE INDUSTRY OF BRICK PRODUCTS**

Mladjana ASIMI, Veniamin ASIMI, Kristina ASIMI, DOO "Neimar" Zrenjanin, Serbia

**ANALIZA ENERGETSKE EFIKASNOSTI I UTICAJ ELEKTROMOTORNIH POGONA SA AKTIVNIM ISPRAVLJAČEM NA DISTRIBUTIVNU MREŽU**  
**ANALYSIS OF ENERGY EFFICIENCY AND INFLUENCE OF ELECTRICAL DRIVES WITH ACTIVE RECTIFIER TO THE SUPPLY GRID**

Leposava RISTIĆ, Milan BEBIĆ, Taufik TALUO, Marko Šinik, Ilija MIHAILOVIĆ, Dragan JEVTIĆ, Neša RAŠIĆ, University of Belgrade, School of Electrical Engineering, Serbia

**PRIMENA APSORPCIONE RASHLADNE MAŠINE U CILJU KORIŠĆENJA OTPADNE TOPLOTE IZ PROCESNE INDUSTRIJE**  
**APPLICATION OF ABSORPTION CHILLER FOR UTILIZATION OF WASTE HEAT FROM PROCESS INDUSTRY**

Nikola TANASIĆ, Mirjana STAMENIĆ, Marta TRNINIĆ, Tomislav SIMONOVIĆ, Faculty of Mechanical Engineering in Belgrade, Serbia

**PREGLED REZULTATA PROJEKTA "ISTRAŽIVANJE, RAZVOJ I PRIMENA PROGRAMA I MERA ENERGETSKE EFIKASNOSTI ELEKTROMOTORNIH POGONA"**  
**REVIEW OF RESULTS ON THE PROJECT „RESEARCH, DEVELOPMENT AND IMPLEMENTATION OF PROGRAMMES AND PROCEDURES OF ELECTRIC DRIVES ENERGY EFFICIENCY“**

Miroslav BJEKIĆ, Marko ŠUČUROVIĆ, Saša ŠTATKIĆ, Marko ROSIĆ, Miloš BOŽIĆ, Faculty of Technical Sciences Čačak, Serbia

**POBOLJŠANJA RESURSNE EFIKANOSTI I ČISTIJE PROIZVODNJE U PROIZVODNJI NAMJEŠTAJA**  
**IMPROVEMENTS IN RESOURCE EFFICIENCY AND CLEANER PRODUCTION IN THE FURNITURE INDUSTRY**

Sanda MIDŽIĆ-KURTAGIĆ, Džana KADRIĆ, Nijaz DELALIĆ Samra ARNAUT, Azra SOFTIĆ, Kerima MEDAR, Faculty of Mechanical Engineering in Sarajevo, Bosnia & Herzegovina

**ANALIZE ZAVISNOSTI PARAMATARA/VARIJABLI IZ TERMO-REGULACIONIH PROCESA BAZIRANIH NA IBM SPSS STATISTIČKIM ALATIMA**  
**DEPENDENCE ANALYSIS OF PARAMETERS/VARIABLES FROM THERMO-FIXING PROCESS BASED ON IBM SPSS STATISTICS TOOL**

Mesud RAMIĆ, Amra HASEČIĆ; Ejub DŽAFEROVIĆ, Prevent Fabrics d.o.o, Bosnia & Herzegovina

**ANALIZA UNAPREĐENJA ENERGETSKE EFIKASNOSTI ŠAHTNIH PEĆI  
ANALYSIS OF ENERGY EFFICIENCY IMPROVEMENT OF SHAFT KILN**

Risto V. FILKOSKI, Ilija J. PETROVSKI, Faculty of Mechanical Engineering, University "Ss Cyril and Methodius, Skopje, Zlatko GJURCHINOVSKI, Vardar Dolomit, Gostivar, Macedonia

**Petak, 23. jun 2017 / Friday, June 23, 2017**

09:00-10:50 *Energetska efikasnost i energetska menadžment u zgradarstvu*  
*Energy efficiency and energy management within building*

UVODNA IZLAGANJA (u trajanju od po 30 minuta, sa uključenom diskusijom) / INTRODUCTORY LECTURES (30 minutes per lecture, discussion included):

**THE MAIN STEPS FOR ACHIEVEMENT OF HIGH ENERGY EFFICIENCY IN BUILDINGS**

Vojislav NOVAKOVIC, Norwegian University of Science and Technology, Trondheim, Norway

**TERMOTEHNIČKI ASPEKTI ENERGETSKE OBNOVE ZGRADA U SRBIJI**

Branislav ŽIVKOVIĆ, Faculty of Mechanical Engineering in Belgrade, Serbia

**EE U ZGRADARSTVU**

Maja TODOROVIĆ, Faculty of Mechanical Engineering in Belgrade, Serbia

PREZENTACIJE RADOVA (u trajanju od po 10 minuta, sa diskusijom uključenom) / PAPER PRESENTATIONS (10 minutes per lecture, discussion included):

**EFEKTI UVOĐENJA POBOLJŠANOG SISTEMA UPRAVLJANJA ENERGETSKIM TOKOVIMA U URGENTNOM CENTRU KLINIČKOG CENTRA VOJVODINE**

**EFFECTS OF INTRODUCING THE IMPROVED ENERGY MANAGEMENT SYSTEM IN URGENT CARE CENTER OF THE CLINICAL CENTER OF VOJVODINA**

Đura OROS, Veran VASIĆ, Velimir ČONGRADAC, Filip KULIĆ, Faculty of Technical Sciences, Novi Sad, Serbia

**MODEL TEHNO-EKONOMSKE OPTIMIZACIJE I ODRŽIVE SREDINE DALJINSKOG GREJANJA U URBANOM PODRUČJU**

**A MODEL FOR TECHNO-ECONOMIC OPTIMISATION AND ENVIRONMENTAL SUSTAINABILITY OF THE HEATING STRUCTURE IN AN URBAN AREA**

Risto V. FILKOSKI, Done J. TASHEVSKI, Igor K. SHESHO, Dame M. DIMITROVSKI, Slave ARMENSKI, Dalibor STOJEVSKI, Faculty of Mechanical Engineering, University "Ss Cyril and Methodius, Skopje, Macedonia

10:50-11:10 KAFE PAUZA / COFFEE BREAK

11:10-12:40 *Energetska efikasnost i energetska menadžment – snabdevanje energijom*  
*Energy efficiency and energy management – energy supply*

PREZENTACIJE RADOVA (u trajanju od po 10 minuta, sa diskusijom uključenom) / PAPER PRESENTATIONS (10 minutes per lecture, discussion included):

**KOMPARACIJA SEKTORA TOPLOTNE ENERGIJE U PROGRAMU OSTVARIVANJA STRATEGIJE RAZVOJA ENERGETIKE REPUBLIKE SRPSKE DO 2030.G. U ODNOSU NA FBIH, REPUBLIKU SRBIJU I REPUBLIKU HRVATSKU**

**COMPARISON OF DISTRICT HEATING SECTOR IMPLEMENTATION PROGRAM OF ENERGY STRATEGY OF REPUBLIC OF SRPSKA UP TO 2030, COMPARED TO FEDERATION BIH, REPUBLIC OF SERBIA AND REPUBLIC OF CROATIA**

Maja MRKIĆ BOSANČIĆ, Ministry of industry, energy and mining of the Republic of Srpska, Petar GVERO, Srđan VASKOVIĆ, Faculty of Mechanical Engineering in Banja Luka, Semin PETROVIĆ, Research and development center for gas technique, Bosnia & Herzegovina

**UTICAJ RADNIH PARAMETARA KOTLA NA VISINU NIVOVA GORIVA NA POKRETNOSTI REŠETKI**

**THE IMPACT OF THE OPERATING PARAMETERS OF THE BOILER ON THE HEIGHT OF THE FUEL BED ON THE MOVING GRATE**

Midhat OSMIĆ, Sead DELALIĆ, Indira BULJUBAŠIĆ, Mechanical Faculty of Tuzla, Bosnia & Herzegovina

**PARNO ILI VODENO POGONJENI EJEKTORI U ELEKTRANAMA SA GASNIM TURBINAMA  
STEAM OR WATER-DRIVEN MIXING EJECTOR IN GAS-TURBINE-CYCLE POWER PLANT  
CONFIGURATIONS**

Branko STANKOVIĆ, McMaster University, Hamilton, Canada

**PRELAZ SISTEMA DALJINSKOG GREJANJA U PAMETNU/INTELIGENTNU TOPLOTNU MREŽU I  
INTEGRACIJA U ODRŽIVE ENERGETSKE SISTEME**

**TRANSITION OF DHS INTO SMART/INTELLIGENT THERMAL GRID AND INTEGRATING DHS INTO  
SUSTAINABLE ENERGY SYSTEMS**

Amer KARABEGOVIĆ, PETROL d.d. Ljubljana, Slovenia, Adnan KARAHMETOVIĆ, "Centralno grejanje"  
dd Tuzla, Tuzla, Bosnia and Herzegovina

**POVEĆANJE ENERGETSKE EFIKASNOSTI NA MAŠINAMA POMOĆNE MEHANIZACIJE U PROTEKLOM  
PETOGODIŠNJEM PERIODU I MOGUĆNOST UVOĐENJA TNG-A RADI SMANJENJA ŠTETNE EMISIJE  
CO2 NA "PK DRMNO"**

**INCREASING ENERGY EFFICIENCY ON THE MACHINES AUXILIARY MACHINERY IN THE PAST FIVE  
YEARS AND THE POSSIBILITY OF INTRODUCING LPG TO REDUCE CO2 EMISSIONS THE "PK DRMNO"**

Zoran MILOŠEVIĆ, Radiša ĐURIĆ, EPS TE Kostolac, Serbia

**UNAPREĐENJE ENERGETSKE EFIKASNOSTI U OKRUŽNOM GREJANJU U SRBIJI  
IMPROVEMENT OF THE ENERGY EFFICIENCY OF DISTRICT HEATING IN SERBIA**

Danijela SIMONOVIĆ, Mihajlo GIGOV, Accreditation body of Serbia, Serbia

**MERENJE, UPRAVLJANJE I VIZUELIZACIJE PROIZVODNJE TOPLOTNE ENERGIJE U KOTLOVSKOM  
POSTROJENJU "NOVA KOLONIJA", JEP KRALJEVO**

**MEASUREMENT, CONTROL AND VISUALISATION OF THE PRODUCTION OF THERMAL ENERGY IN  
THE BOILER FACILITY „NOVA KOLONIJA“, PUBLIC ENERGY COMPANY KRALJEVO**

Dragan BALŠIĆ, JEP Toplana, Serbia

**PRIMENA TEHNOLOGIJE NISKO TEMPERATURNOG VRTLOŽNOG SAGOREVANJA U INDUSTRIJSKIM  
KOTLOVSKIM POSTROJENJIMA**

**APPLICATION OF LOW TEMPERATURE VORTEX COMBUSTION TECHNOLOGY AT INDUSTRIAL BOILER  
PLANTS**

Slobodan V. ĐEKIĆ, Konstantin A. GRIGORYEV, Vitali E. SKUDICKII, Inter Kontakt - Energo d.o.o, Serbia

**INTEGRACIJA ENERGETSKOG SISTEMA KROZ DISTRIBUIRANU KOGENERACIJU – STUDIJA  
BOLNIČKOG I OKRUŽNOG GREJNOG SISTEMA**

**INTEGRATION OF ENERGY SYSTEM THROUGH DISTRIBUTED COGENERATION – THE KEY STUDY OF  
HOSPITAL AND DISTRICT HEATING SYSTEM**

Jovan PETROVIĆ, Jovan KRSTIĆ, Ivan STEFANOVIĆ, University of Novi Sad Faculty of Technical  
Sciences, Serbia

12:40-14:00 RUČAK / LUNCH

14:00-15:30 **Zaštita životne sredine i održivi razvoj**  
**Environmental protection and sustainable development**

UVODNO IZLAGANJE (u trajanju od po 30 minuta, sa uključenom diskusijom) / INTRODUCTORY  
LECTURE (30 minutes per lecture, discussion included):

**DUGOROČNA PROJEKCIJA EMISIJA GHG U SEKTORIMA ENERGETIKE I INDUSTRIJSKIH PROCESA I  
MOGUĆNOSTI SMANJENJA U REPUBLICI SRBIJI**

**LONG-TERM PROJECTIONS OF GHG EMISSIONS IN THE ENERGY AND INDUSTRIAL SECTORS AND  
MITIGATION MEASURES IN THE REPUBLIC OF SERBIA**

Aleksandar JOVOVIĆ, Dušan TODOROVIĆ, Dejan RADIĆ, Danijela BOŽANIĆ, Matej GASPERIĆ, Faculty  
of Mechanical Engineering in Belgrade, Serbia

**Petak, 23. jun 2017 / Friday, June 23, 2017**

PREZENTACIJE RADOVA (u trajanju od po 10 minuta, sa diskusijom uključenom) / PAPER PRESENTATIONS (10 minutes per lecture, discussion included):

**PROCENA MOGUĆNOSTI PROIZVODNJE GORIVA IZ ČVRSTOG I BIORAZGRADIVOG OTPADA U BOSNI I HERCEGOVINI**

**ASSESSMENT OF POSSIBILITIES TO PRODUCE SRF/RDF IN BOSNIA AND HERZEGOVINA**

Sanda MIDŽIĆ KURTAGIĆ, Šejla MAHMUTOVIĆ, Irem SILAJDŽIĆ, Faculty of Mechanical Engineering in Sarajevo, Bosnia & Herzegovina

**STUDIJA IZVODLJIVOSTI UTICAJA NA OKOLINU DALJINSKOG GREJANJA BANJA LUKE  
ENVIRONMENTAL ASPECTS FEASIBILITY PROJECT FOR DISTRICT HEATING OF BANJA LUKA**

Sanda MIDŽIĆ-KURTAGIĆ, Samra ARNAUT, Irem SILAJDŽIĆ, Faculty of Mechanical Engineering in Sarajevo, Bosnia & Herzegovina

**ENERGETSKI EFIKASNO I ZA OKOLINU PRIHVATLJIVO RECIKLIRANJE OTPADNE AUTO GUME  
FRIENDLY AND ENERGY EFFICIENT RECYCLING OF WASTE TIRE RUBBER**

Jelena PAVLIČEVIĆ, Brane VUKOV, Dejan KOJIĆ, Oskar BERA i Jaroslava BUDINSKI-SIMENDIĆ, University of Novi Sad, Faculty of Technology, Serbia

**FUNKCIJA RAZLIČITIH POLIMERA U TRETMANU VODE  
FUNCTION OF VARIOUS POLYMERS IN WATER TREATMENT**

Ivan S. RISTIĆ, Sanja M. RACKOV, Tamara ERCEG, Branka PILIĆ, Aleksandra MILETIĆ, Suzana CAKIĆ, Faculty of Technology, University of Novi Sad, Serbia

**UTICAJ IZGRADNJE AUTOPUTA DEMIR KAPIJA –SMOKVICA NA ZAGAĐENJE OKOLINE  
IMPACT OF CONSTRUCTION ON THE HIGHWAY DEMIR KAPIJA – SMOKVICA ON ENVIRONMENTAL POLLUTION**

Tale GERAMITCIOSKI, Vangelce MITREVSKI, Vladimir MIJAKOVSKI, Faculty of Technical Sciences, Macedonia

**ENERGETSKA EFIKASNOST U PROCESU DOBIJANJA INTEGRISANE DOZVOLE – SEKTOR ZA INTENZIVAN UZGOJ ŽIVINE I SVINJA  
ENERGY EFFICIENCY IN IPPC PERMITTING PROCESS - SECTOR FOR INTENSIVE REARING OF POULTRY AND PIGS**

Bojana VUKADINOVIĆ, Faculty of technology and metallurgy in Belgrade, Serbia, Mirjana STAMENIĆ, Mirjana KIJEVČANIN, Johannes FRESNER, Christina KRENN

15:30-15:50 KAFE PAUZA / COFFEE BREAK

15:50-16:50 *Zaštita životne sredine i održivi razvoj  
Environmental protection and sustainable development*

PREZENTACIJE RADOVA (u trajanju od po 10 minuta, sa diskusijom uključenom) / PAPER PRESENTATIONS (10 minutes per lecture, discussion included):

**KALIBRACIJA I VALIDACIJA AUTOMATSKOG MERNOG SISTEMA ZA KONTINUALNO MERENJE EMISIJE PRAŠKASTIH MATERIJA U TE „NIKOLA TESLA B“ NA BLOKU B1 – PET GODINA OD IMPLEMENTACIJE STANDARDA SRPS EN 14181**

**CALIBRATION AND VALIDATION OF DUST AUTOMATED MEASURING SYSTEM IN TPP “NIKOLA TESLA B” ON UNIT B1 – FIVE YEARS OF IMPLEMENTATION OF EN 14181**

Marko PAVLOVIĆ, Mihajlo GIGOV, Sandra PETKOVIĆ, Miroslav SOFRENIĆ, Mining institute Ltd, Serbia

**ZAGAĐENJE VAZDUHA U GRADSKIM SREDINAMA EMISIJOM SUSPENDOVANIH ČESTICA MANJIH OD 10µm IZ MALIH KUĆNIH UREĐAJA I MERE ZA NJIHOVO SMANJENJE  
URBAN AIR POLLUTION CAUSED BY THE EMISSION OF PM10 FROM THE SMALL HOUSEHOLD DEVICES AND ABATEMENT MEASURES**

Petar GVERO, Ranka RADIĆ, Milovan KOTUR, Danijela KARDAŠ, University of Banja Luka

**PREPORUKE ZA POBOLJŠANJE KVALITETA OKOLNOG VAZDUHA U BITOLJU  
THE RECOMMENDATIONS FOR IMPROVING AMBIENT AIR QUALITY IN BITOLA**

Vangelce MITREVSKI, Cvetanka MITREVSKA, Tale GERAMITCIOSKI, Vladimir MIJAKOVSKI, Faculty of Technical Sciences, Serbia

**RAZLOZI KOJI DOPRINOSU ZNAČAJNOM ZAGAĐENJU U SKOPLJU**

**REASONS THAT CONTRIBUTE TO THE ENORMOUS POLLUTION IN SKOPJE**

Monika LUTOVSKA, Faculty of Technical Sciences, University „Mother Teresa“, Skopje, Vladimir MIJAKOVSKI, Tale GERAMITCIOSKI, Faculty of Technical Sciences, University “St. Kliment Ohridski”, Bitola, Vladimir GJORGIEVSKI, Faculty of Electrical Engineering and Information Technologies, University “Ss. Cyril and Methodius”, Skopje, Macedonia

**DIJAGNOSTIKA PLAMENA VIZUELIZACIJOM HEMILUMINISCENCIJE CH GRUPE**

**PROCESS SIMULATIONS OF SMALL SCALE BIOMASS POWER PLANT**

Vuk ADŽIĆ, Aleksandar MILIVOJEVIĆ, Boško ĆOSIĆ, Miroljub ADŽIĆ, Faculty of Mechanical Engineering in Belgrade, Serbia

**NOVA NAPREDNA TEHNOLOGIJA ZA UKLANJANJE FENOLA IZ OTPADNIH VODA U VENTURI REAKTORU**

**A NOVEL ADVANCED TECHNOLOGY FOR REMOVAL OF PHENOL FROM WASTEWATERS IN A VENTURI REACTOR**

Sandra PETKOVIĆ, Borivoj ADNAĐEVIĆ, Jelena JOVANOVIĆ, Mihajlo GIGOV, Mining institute Ltd, Serbia

16:50-17:00 PAUZA / BREAK

17:00-18:50 ***Pumpe i pumpni sistemi - Primeri dobre prakse i izvedenih rešenja povećanja energetske efikasnosti***  
***Pump units and systems - Good practice and solutions for increasing energy efficiency***

***Moderatori / Moderators:*** doc. dr Đorđe Čantrak, Faculty of Mechanical Engineering, University of Belgrade, doc. dr Slobodan Tašin, Faculty of Technical Sciences, University of Novi Sad, doc. dr Živojin Stamenković, Faculty of Mechanical Engineering, University of Belgrade

UVODNO IZLAGANJE (u trajanju od po 30 minuta, sa uključenom diskusijom) / INTRODUCTORY LECTURE (30 minutes per lecture, discussion included):

**EKSPERIMENTALNE METODE I POSTROJENJA NA KATEDRI ZA HIDRAULIČNE MAŠINE I ENERGETSKE SISTEME, MAŠINSKOG FAKULTETA UNIVERZITETA U BEOGRADU**

**EXPERIMENTAL METHODS AND TEST RIGS IN THE HYDRAULIC MACHINERY AND ENERGY SYSTEMS DEPARTMENT, FACULTY OF MECHANICAL ENGINEERING, UNIVERSITY OF BELGRADE**

Đorđe ČANTRAK, Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia

PREZENTACIJE RADOVA (u trajanju od po 10 minuta, sa diskusijom uključenom) / PAPER PRESENTATIONS (10 minutes per lecture, discussion included):

**ENERGETSKA EFIKASNOST – PUMPE I TURBINE U SISTEMIMA ZA DISTRIBUCIJU VODE**

**ENERGY EFFICIENCY - PUMPS AND TURBINES IN WATER DISTRIBUTION SYSTEMS**

Živojin STAMENKOVIĆ, Miloš KOCIĆ, Jasmina BOGDANOVIĆ-JOVANOVIĆ, Faculty of Mechanical Engineering, University of Nis, Serbia

**UNAPREĐENJE ENERGETSKE EFIKASNOSTI U PUMPINIM SISTEMIMA - DVE STUDIJE SLUČAJA O PUMPINIM STANICAMA**

**IMPROVING ENERGY EFFICIENCY IN PUMPING SYSTEM - TWO CASE STUDIES OF PUMP STATIONS**

Živojin STAMENKOVIĆ, Dragan SVRKOTA, Dragica MILENKOVIĆ, Faculty of Mechanical Engineering, University of Nis, Serbia

**PRIMENA FREKVENTNIH REGULATORA NA PUMPAMA U VODOVODIMA I POSTROJENJIMA ZA TRETMAN VODE**

**APPLICATION OF FREQUENCY CONVERTERS ON PUMPS IN WATER TREATMENT PLANTS AND WATER UTILITIES**

Aleksandar NIKOLIĆ, Electrical Engineering Institute Nikola Tesla, Serbia

**PRINCIPI PRIMENE VISOKOEFIKASNIH PUMPI, UZ PRIKAZ PRAKTIČNIH REŠENJA**

**PRINCIPLES OF HIGH EFFICIENT PUMPS AND THE BEST PRACTICAL SOLUTIONS**

Vlado VASILJEVIĆ, Stefan ČUBROVIĆ, WILO Beograd d.o.o., Serbia

**Petak, 23. jun 2017 / Friday, June 23, 2017**

**SPEED CONTROLLED PUMPS, BENEFITS AND RISKS - CASE STUDY**

**PUMPE SA REGULISANOM BRZINOM OBR TANJA, PREDNOSTI I RIZICI - PRIMER IZ PRAKSE**

Slobodan TAŠIN, Faculty of Technical Sciences, University of Novi Sad, Siniša BIKIĆ, Faculty of Technical Sciences, University of Novi Sad, Zlatko ARVAJI, JKP Vodovod i kanalizacija, Novi Sad, Serbia

**NAPREDNA TEHNOLOŠKA REŠENJA U OPŠTINSKIM VODOVODIMA**

**ADVANCED TECHNOLOGY SOLUTIONS IN MUNICIPAL WATER INFRASTRUCTURE**

Marijan ŠILOVIĆ, KSB SEE, Serbia

**ENERGETSKE UŠTEDE U SISTEMIMA ZAPTIVANJA**

**ENERGY SAVINGS FROM SEAL SUPPORT SYSTEMS**

Nebojša RADIĆ, MS Promcom d.o.o., Belgrade, Serbia

**PUMPNO POSTROJENJE U OKVIRU CENTRA ZA OBUKU ENERGETSKIH MENADŽERA NA**

**MAŠINSKOM FAKULTETU UNIVERZITETA U BEOGRADU**

**PUMP SYSTEM IN THE ENERGY MANAGER TRAINING CENTER AT THE FACULTY OF MECHANICAL ENGINEERING UNIVERSITY OF BELGRADE**

Đorđe ČANTRAK, Novica JANKOVIĆ, Miloš BANJAC, Dejan ILIĆ, Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia

18:50-19:20

***Posebna sesija – obrazovanje***

***Special session – education***

**“TIMSKI RAD” NA MAŠINSKOM FAKULTETU U BANJA LUCI**

**“TEAMWORK” AT FACULTY OF MECHANICAL ENGINEERING BANJA LUKA**

Danijela KARDAŠ, Goran JANJIĆ, Petar GVERO, University of Banja Luka, Faculty of Mechanical Engineering, Bosnia & Herzegovina

**KORIŠĆENJE VEŠTAČKE INTELIGENCIJE ZA UNAPREĐENJE PRODUKTIVNOSTI PRAĆENJA SISTEMA SA SOLARNIM PANELIMA**

**USING MACHINE LEARNING FOR IMPROVING OF THE PRODUCTIVITY OF TRACKING PV SYSTEMS**

Dusko Lukac, Universitätsdozent/Laboringenieur/Kooperationen/F&E, Germany

**RAZVOJ NASTAVNIH PLANOVA I PROGRAMA ZA OBRAZOVANJE U OBLASTI ENERGETIKE I ZAŠTITE ŽIVOTNE SREDINE – NORVEŠKO-WBC ISKUSTVO**

**DEVELOPMENT OF CURRICULA FOR EDUCATION IN THE FIELD OF ENERGY AND ENVIRONMENT - NORWEGIAN-WBC EXPERIENCE**

Vojislav NOVAKOVIC, Norwegian University of Science and Technology, Trondheim, Norway

19:20-19:30

PAUZA / BREAK

19:30-20:30

***Posebna sesija – primeri dobre prakse i izvedenih rešenja povećanja EE i primene novih izvora energije***

***Special session – good practice and applied solutions examples for EE and new energy sources***

PREZENTACIJE RADOVA (u trajanju od po 10 minuta, sa diskusijom uključenom) / PAPER PRESENTATIONS (10 minutes per lecture, discussion included):

**ANALIZA INDIKATORA ENERGETSKE EFIKASNOSTI U POSTROJENJU ZA DALJINSKO GREJANJE KONJARNIK (JP BEOGRADSKE ELEKTRANE)**

**ANALYSIS OF THE ENERGY EFFICIENCY INDICATORS IN THE DISTRICT HEATING PLANT KONJARNIK (PUC BEOGRADSKE ELEKTRANE)**

Vladimir TANASIĆ, PUC „BEOGRADSKE ELEKTRANE“, Belgrade Electric Nikola TANASIĆ, Faculty of mechanical engineering in Belgrade, Serbia Bojan BOGDANOVIĆ, Branimir VIDAČIĆ, PUC „BEOGRADSKE ELEKTRANE“

**ANALIZA KVALITETA I POTROŠNJE ELEKTRIČNE ENERGIJE TOKOM GARANCIJSKIH ISPITIVANJA INDUSTRIJSKIH POSTROJENJA**

**POWER QUALITY AND ELECTRICAL ENERGY CONSUMPTION ANALYSIS DURING GUARANTEE TESTING OF THE INDUSTRIAL PLANTS**

Aleksandar NIKOLIĆ, Radoslav ANTIĆ, Electrical Engineering Institute Nikola Tesla, Serbia



**Petak, 23. jun 2017 / Friday, June 23, 2017**

**ZNAČAJ SISTEMA INTEGRISANOG MENADŽMENTA ZA INDUSTRIJSKE SISTEME ORIJENTISANE KA ŽIVOTNOJ SREDINI**

**IMPORTANCE OF INTEGRATED MANAGEMENT SYSTEMS FOR ENVIRONMENTAL FRIENDLY INDUSTRIAL APPLICATION**

Aleksandar NIKOLIĆ, Ivana KRSTIĆ, Electrical Engineering Institute Nikola Tesla, Serbia

**METODOLOGIJA I ORGANIZACIJA PRAKTIČNE OBUKE NA PARNOM KOTLU I PARNIM INSTALACIJAMA U TRENING CENTRU ZA ENERGETSKE MENADŽERE PRI MAŠINSKOM FAKULTETU UNIVERZITETA U BEOGRADU**

**METHODOLOGY AND ORGANIZATION OF PRACTICAL TRAINING ON STEAM BOILER AND STEAM TRAP INSTALLATIONS IN ENERGY MANAGER TRAINING CENTER AT THE FACULTY OF MECHANICAL ENGINEERING UNIVERSITY OF BELGRADE**

Mirjana STAMENIĆ, Miloš BANJAC, Nikola TANASIĆ, Faculty of mechanical engineering in Belgrade, Serbia

**SISTEM KOMPRIMOVANOG VAZDUHA U TRENING CENTRU ZA ENERGETSKE MENADŽERE PRI MAŠINSKOM FAKULTETU UNIVERZITETA U BEOGRADU**

**COMPRESSED AIR SYSTEM IN THE ENERGY MANAGER TRAINING CENTER AT THE FACULTY OF MECHANICAL ENGINEERING UNIVERSITY OF BELGRADE**

Mirjana STAMENIĆ, Nikola TANASIĆ, Đorđe ČANTRAK, Faculty of mechanical engineering in Belgrade, Serbia

**KREATIVNE MOGUĆNOSTI U OBLASTI ENERGETSKE EFIKASNOSTI**  
**CREATIVE OPTIONS IN ENERGY EFFICIENCY**

Rasul BEISEEV, NIS ad, Serbia

21:00 SVEČANA VEČERA / DINNER CEREMONY

**Subota, 24. jun 2017 / Saturday, June 24, 2017**

09:00-10:40 *Korišćenje obnovljivih izvora energije*  
*The use of renewable energy sources*

UVODNO IZLAGANJE (u trajanju od 30 minuta, sa diskusijom uključenom) / INTRODUCTORY LECTURE (30 minutes per lecture, discussion included):

**ENERGETSKA ELEKTRONIKA U SISTEMIMA VETROGENERATORA**  
**POWER ELECTRONICS IN WIND ENERGY SYSTEMS**

Ana VLADAN STANKOVIC, Cleveland State University, Cleveland, Ohio, USA

PREZENTACIJE RADOVA (u trajanju od 10 minuta, sa diskusijom uključenom) / PAPER PRESENTATIONS (10 minutes per lecture, discussion included):

**INTEGRACIJA OBNOVLJIVIH IZVORA ELEKTRIČNE ENERGIJE U DISTRIBUTIVNI SISTEM**  
**THE INTEGRATION OF RENEWABLE ELECTRICITY INTO THE DISTRIBUTION SYSTEM**

Jovan ČARNIĆ, Radislav Milankov, EPS, Serbia

**PROIZVODNJA ELEKTRIČNE ENERGIJE IZ OBNOVLJIVIH IZVORA I PREPREKE ZA DALJI RAZVOJ U REPUBLICI MAKEDONIJI**

**PRODUCTION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES AND OBSTACLES TO FURTHER DEVELOPMENT IN THE REPUBLIC OF MACEDONIA**

Vladimir MIJAKOVSKI, Cvetanka MITREVSKA, Tale GERAMITČIOSKI, Vangelče MITREVSKI, Zoran TRAJKOVSKI, Faculty of Technical Sciences, Macedonia

**SKLADIŠTENJE ENERGIJE ZA INTEGRACIJU OBNOVLJIVE ELEKTRIČNE ENERGIJE**  
**ENERGY STORAGE FOR INTEGRATION OF RENEWABLE ELECTRICITY - CASE OF HITES**

Dragan STEVANOVIĆ, Energy & Consulting, Germany

Subota, 24. jun 2017 / Saturday, June 24, 2017

**ANALIZA RADA FOTONAPONSKE ELEKTRANE „ENERGY“ 150 kWp PRIKLJUČENE NA SREDNJENAPONSKU DISTRIBUTIVNU MREŽU U OPĆINI KAKANJ- BiH**  
**ANALYSIS OF WORK OF THE PHOTOVOLTAIC POWER PLANT “ENERGY” 150 kWp CONNECTED TO THE MEDIUM VOLTAGE DISTRIBUTION NETWORK IN THE MUNICIPALITY KAKANJ- BiH**  
Sakib JUSIĆ, Emir HRNJIĆ, Elektroprivreda BiH dd Sarajevo – ED Zenica, Bosnia & Herzegovina

**PRIKAZ RADA SOLARNE ELEKTRANE**  
**PRESENTATION OF WORK OF A SOLAR POWERPLANT**

Miloš KOSTIĆ, CEEFOR, Serbia

10:40-11:00 KAFE PAUZA / COFFEE BREAK

11:00-13:30 *Problemi primene biomase – okrugli sto, prezentacije radova i diskusija*  
*Issues of biomass application – round table, paper presentations and discussion*

UVODNA IZLAGANJA (u trajanju od 30 minuta, sa diskusijom uključenom) / INTRODUCTORY LECTURES (30 minutes per lecture, discussion included):

**TRENTNA I BUDUĆA UPOTREBA BIOMASE U ENERGETSKOM SEKTORU**  
**ACTUAL AND FUTURE BIOMASS UTILIZATION IN ENERGY SECTOR**

Dragoslava STOJILJKOVIĆ, Mašinski fakultet u Beogradu, Serbia, Dr Calliope PANOUTSOU, Imperial College Centre for Energy Policy & Technology, Greece

**KAKO KORISTIMO BIOMASU?**  
**HOW WE USE BIOMAS?**

Branislava LEPOTIĆ KOVAČEVIĆ, JP Transnafta Pančevo, Dragoslava STOJILJKOVIĆ, University of Belgrade – Faculty of Mechanical Engineering, Aleksandar KOVAČEVIĆ, Oxford Institute For Energy Studies, Serbia

PREZENTACIJE RADOVA (u trajanju od 10 minuta, sa diskusijom uključenom) / PAPER PRESENTATIONS (10 minutes per lecture, discussion included):

**OČUVANJE ČISTOG VAZDUHA U URBANIM SREDINAMA SAGOREVANJEM DRVNE BIOMASE SLEDEĆI PRIMER BANJA LUKE**

**PRESERVING CLEAN AIR IN THE URBAN AREAS BY COMBUSTING WOODEN BIOMASS USING BANJA LUKA AS AN EXAMPLE**

Vinko L. BABIĆ, Zdravko N. MILOVANOVIĆ, Jovan B. ŠKUNDRIĆ, Vukašin TINTOR, Faculty of Mechanical Engineering Banja Luka, Bosnia & Herzegovina

**POTENCIJALI MISCHANTUS X GIGANTEUS-A U FUNKCIJI ODRŽIVOG RAZVOJA**  
**MISCHANTUS X GIGANTEUS POTENTIALS IN SUSTAINABLE DEVELOPMENT**

Ivana PETRIĆ, Gordana DRAŽIĆ, Dragi ANTONIJEVIĆ, Slobodan STEFANOVIĆ, Nevena BOŽIĆ, Futura, Serbia

**PRIKAZ MALE GASNE ELEKTRANE NA BIOMASU SA KOMBINOVANOM PROIZVODNJOM TOPLOTNE I ELEKTRIČNE ENERGIJE**

**REVIEW OF SMALL-SCALE BIOMASS GASIFICATION HEAT AND POWER PLANT**

Nebojsa MANIĆ, Marta TRNINIĆ, Dragoslava STOJILJKOVIĆ, Aleksandar JOVOVIĆ, Faculty of Mechanical Engineering, Serbia

**KORISTI INVESTICIJE U GREJANJE SA BIOMASOM – POSTAVLJANJE MATEMATIČKOG MODELA**  
**BENEFITS OF THE INVESTMENTS OF HEATING WITH BIOMASS - MATHEMATICAL MODEL**

Cvete Dimitrieska, Silvana ANGELEVSKA, Zore ANGELEVSKI, Faculty of Technical Sciences - Bitola, University "St. Kliment Ohridski" - Bitola, Macedonia

**ODREĐIVANJE KINETIČKIH PARAMETARA TERMIČKO-HEMIJSKE KONVERZIJE BIOMASE KORIŠĆENJEM TERMOGRAVIMETRIJSKE ANALIZE**

**ESTIMATION OF KINETIC PARAMETERS FOR BIOMASS THERMOCHEMICAL CONVERSION USING TGA**  
Nebojša MANIĆ, Vladimir JOVANOVIĆ, Miloš RADOJEVIĆ, Dragoslava STOJILJKOVIĆ, Faculty of Mechanical Engineering, Serbia

**Subota, 24. jun 2017 / Saturday, June 24, 2017**

**RAZVOJ GASNOG POSTROJENJA SNAGE 200KW ZA PROIZVODNJU ELEKTRIČNE ENERGIJE NA DRVNU MASU**

**DEVELOPMENT OF WOOD GASIFICATION PLANT FOR 200 kW ELECTRICITY PRODUCTION**

Goran JANKES, Miloš KOSTIĆ, Miloš SALETA, Nikola PETKOVIĆ, Svetlana JOVANOVIĆ, Marko RADOSAVLJEVIĆ, Center for Energy Efficiency and Sustainable Development – CEEFOR, Beograd, Serbia

**UTICAJNI FAKTORI ZA DONOŠENJE ODLUKE KORIŠĆENJEM VIŠEKRITERIJUMSKE ANALIZE U IZBORU GASNOG POSTROJENJA ZA KOMBINOVANU PROIZVODNJU TOPLOTE I ELEKTRIČNE ENERGIJE NA BIOMASU**

**FACTORS' INFLUENCE DURING DECISION MAKING USING MULTI-CRITERIA ANALYSIS FOR CHOICE OF COMBINED HEAT AND POWER PRODUCTION PLANT WITH BIOMASS GASIFICATION**

Damir ĐAKOVIĆ, Branka GVOZDENAC UROŠEVIĆ, Mirjana STAMENIĆ, Faculty of Technical Sciences, Serbia

**SMERNICE ZA DALJI RAZVOJ KORIŠĆENJA GEOTERMALNE ENERGIJE U KGH SISTEMIMA SRBIJE  
GUIDELINES FOR THE FURTHER DEVELOPMENT OF GEOTHERMAL ENERGY IN HVAC SYSTEMS IN SERBIA**

Maja ĐUROVIĆ PETROVIĆ, Anđela LAZAREVIĆ, Jasminu LOZANOVIĆ ŠAJIĆ, University of Belgrade, Innovation Centre of Mechanical Faculty, Serbia

13:30-13:40 PAUZA / BREAK

13:40 ZATVARANJE KONFERENCIJE – ZAKLJUČCI / CLOSING CEREMONY – CONCLUSIONS

14:00 RUČAK / LUNCH

## ZVANIČAN JEZIK KONFERENCIJE / CONFERENCE OFFICIAL LANGUAGE

ZVANIČNI JEZICI KONFERENCIJE SU **SRPSKI I ENGESKI** / THE OFFICIAL LANGUAGES OF THE CONFERENCE ARE **SERBIAN AND ENGLISH**.

## DRUŠTVENI PROGRAM / SOCIAL PROGRAM

- Otvaranje će se održati u sredu, 21. juna u 17:00 u Kongresnom centru Romanija u okviru odmarališta Ratko Mitrović / Opening ceremony, Wednesday, June 21 from 17:00 in Congress Center Romanija within the resort Ratko Mitrovic
- Koktel dobrodošlice će se održati u sredu, 21. juna u 19:00 u Kongresnom centru Romanija / Welcome cocktail, Wednesday, June 21 from 19:00 in Congress Center Romanija
- Svečana večera za sve učesnike će se održati u petak, 23. juna u 21h u restoranu "Grand Jezero" / Dinner ceremony for all participants will be held on Friday, June 23 at 21 in Restaurant "Grand Jezero"

## KOTIZACIJA / REGISTRATION FEE

Tip kotizacije / Type of fee	Cena / Price
Za učesnike konferencije / Participants	<b>160 €</b>
Za autore radova i mlade istraživače / Paper authors and young researchers *	<b>120 €</b>
Za studente / Students **	<b>60 €</b>

\* do 35 godina starosti / until the age of 35

\*\* uz potvrdu sa fakulteta o redovnom studiranju, do 30 godina starosti / Followed with a faculty verification of regular studies, till the age of 30

*PDV nije uključen u prikazane cene / VAT is not included in given prices.*

**Učesnici uz kotizaciju dobijaju / Registration fee includes:**

- Pravo učešća na svim sesijama i prezentacijama konferencije
- Zbornik apstrakata
- CD konferencije sa radovima autora i prezentacijama sponzora
- Koktel dobrodošlice
- Zajednička večera
- Ostale konferencijske materijale
- The right to participate in all sessions and conference presentations
- Book of Abstracts
- CD with conference papers and presentations of sponsors
- Welcome Cocktail
- Dinner Voucher
- Other conference materials

## REZERVACIJA SMEŠTAJA / ACCOMMODATION RESERVATION

Cene su date po osobi i po danu i obuhvataju pun pansion, osiguranje i boravišnu taksu / Prices are given per person and per day and cover the full board, insurance and board fee:

SOBA / ROOM	Cena / Price
Jednokrevetna / Single room	<b>33 €</b>
Dvokrevetna / Twin room	<b>28 €</b>

Usluga 21. juna počinje večerom, a 24. juna završava se ručkom / Service starts on June 21 with dinner and ends on June 24 with lunch.

*PDV nije uključen u prikazane cene / VAT is not included in given prices.*

## Kontakt / Contact

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