

PROGRAM KONFERENCIJE IEEP 2022 CONFERENCE PROGRAM



Utorak, 8. novembar 2022 / Tuesday, November 8, 2022 (SALA 211 / ROOM 211, 2. SPRAT / 2. FLOOR)

9:00-10:00 REGISTRACIJA UČESNIKA / REGISTRATION OF THE PARTICIPANTS
10:00-10:30 SVEČANO OTVARANJE / OPENING CEREMONY
POZDRAVNI GOVORI / WELCOME GREETINGS:
Prof. dr Vladimir POPOVIĆ dekan Mašinskog fakulteta /
Dean of the Faculty of Mechanical Engineering
Prof. dr Milan RADOVANOVIĆ predsednik Društva termičara Srbije /
President of the Society of Thermal Engineers of Serbia
Prof. dr Goran JANKES predsednik Organizacionog odbora IEEP 2022 /
President of the Organizing Committee of IEEP 2022
Miroslav Lutovac savetnik predsednika Privredna komora Srbije / Advisor of
the president of the Serbian Chambers of Commerce

ZVANIČNO OTVARANJE / OFFICIAL OPENING

10:30-12:00 UVODNA IZLAGANJA (20 minuta) / INTRODUCTORY LECTURES (20 minutes per lecture)

SOLVING THE NET-ZERO EMISSION EQUATION FOR INDUSTRY

Miodrag M. MESAROVIĆ, Secretary General of the Serbian WEC Member Committee, Senior Advisor in Energoprojekt Entel Consulting Engineers Co. in Belgrade and president of the scientific committee of the Society of Thermal Engineers of Serbia

SUSTAINABLE AND LOW-CARBON ENERGY SYSTEM POLICIES IN DEVELOPING COUNTRIES: A CASE STUDY OF MACEDONIA

Gligor KANEVČE, Macedonian Academy of Science and Art / Makedonska akademija nauka i umetnosti, North Macedonia

USE OF NATURAL GAS IN SERBIA

Vojislav VULETIĆ, Serbian Gas Society / Udruženje za gas Srbije

KLJUČNI REZULTATI I PROJEKCIJE RANIH KONSULTACIJA ZA NACRT NEKP-A / KEY FINDINGS AND PROJECTIONS FOR THE DRAFT NECP EARLY CONSULTATION

Nenad JOVANOVIĆ, Senior Energy Consultant, LDK Consultants / Viši savetnik za energetiku, LDK Consultants

12:00-12:30 KAFE PAUZA / COFFEE BREAK

12:30-13:00 PREZENTACIJA SPONZORA / PRESENTATION OF SPONSOR – ENERGOTEHNIKA JUŽNA BAČKA

13:00-14:00 *Energetska politika, snabdevanje energijom, zakonodavstvo i podsticajni elementi / Energy policy, energy supply, legislature and incentives*

UVODNO IZLAGANJE (20 min. sa diskusijom) / INTRODUCTORY LECTURES (20 min. per lecture, with discussion)
PREZENTACIJE RADOVA (10 min. sa diskusijom) / PAPER PRESENTATIONS (10 min. per lecture, with discussion)

ONE SCENARIO FOR SERBIA'S DECARBONISATION IN THE FIELD OF ENERGY PRODUCTION

Borivoj STEPANOV, Faculty of Technical Sciences, Novi Sad / Univerzitet u Novom Sadu, Fakultet Tehničkih nauka, Serbia

ASSURED CAPACITY, TOTAL ASSURED CAPACITY AND DISPATCHABILITY OF SERBIAN POWER SYSTEM AND POWER PLANTS

Vojin GRKOVIĆ, Đorđe ČANTRAK, Miroslav BENIŠEK, Dragan PETROVIĆ, Đorđije DODER

ENERGY-TIME FRAME PROCEDURE FOR COMPETITIVENESS ASSESSMENT OF ENERGY TECHNOLOGIES

Vojin GRKOVIĆ, Miroslav KLJAJIĆ, Vladimir ŽIVKOVIĆ

SELECTED SUSTAINABLE ENERGY LESSONS FROM FUTURE

Borivoj STEPANOV, Željko VLAOVIĆ, Aleksandar ANĐELKOVIĆ, Vladimir RAJS, Zoran ČEPIĆ, Mladen TOMIĆ

14:00-15:30 RUČAK / LUNCH

15:30-17:00 *Energetska efikasnost i energetska menadžment u industriji /
Energy efficiency and energy management within the industry*

*UVODNO IZLAGANJE (20 min. sa diskusijom) / INTRODUCTORY LECTURES (20 min. per lecture, with discussion)
PREZENTACIJE RADOVA (10 min. sa diskusijom) / PAPER PRESENTATIONS (10 min. per lecture, with discussion)*

**ENERGETSKA EFIKASNOST KAO KLJUČNI POKRETAČ ZA ODRŽIVI RAZVOJ MALIH I SREDNJIH
PREDUZEĆA U INDUSTRIJSKOM SEKTORU SRBIJE / ENERGY EFFICIENCY AS A KEY DRIVER FOR
SUSTAINABLE GROWTH IN SMEs IN INDUSTRIAL SECTOR IN SERBIA**

Mirjana STAMENIĆ, University of Belgrade, Faculty of Mechanical Engineering / Univerzitet u
Beogradu, Mašinski fakultet, Beograd, *Serbia*

**INDUSTRIJSKE TOPLOTNE PUMPE – EKOLOŠKI I ENERGETSKI EFIKASAN OBNOVLJIVI IZVOR
TOPLOTNE ENERGIJE**

Zoran STAJIĆ, Emerson Commercial & Residential Solutions – Vilter

**PRIMENA TOPLOTNIH PUMPI ZA KORIŠĆENJE OTPADNE TOPLOTE U INDUSTRIJI / APPLICATION
OF HEAT PUMPS FOR UTILIZATION OF WASTE HEAT IN INDUSTRY**

Nikola TANASIĆ, Goran JANKES, Mirjana STAMENIĆ, Vuk ADŽIĆ

**RAZMATRANJE MOGUĆNOSTI KORIŠĆENJA OTPADNE TOPLOTE U RAFINERIJAMA / POSSIBILITY
OF USING WASTE HEAT IN OIL REFINERIES**

**Stojan SIMIĆ, Krsto BATINIĆ, Davor MILIĆ, Goran ORAŠANIN, Srđan VASKOVIĆ, Jovana
BLAGOJEVIĆ**

UPOREDNA ANALIZA SUŠENJA DRVETA / COMPARATIVE ANALYSIS OF WOOD DRYING

Vuk MAROVIĆ, Damir ĐAKOVIĆ, Miroslav KLJAJIĆ

**EKSPERIMENTALNA OPTIMIZACIJA ATMOSFERSKIH GORIONIKA MALE SNAGE / EXPERIMENTAL
OPTIMIZATION OF LOW POWER ATMOSPHERIC BURNER**

Aleksandar MILIVOJEVIĆ, Miroljub ADŽIĆ, Vuk ADŽIĆ, Mirjana STAMENIĆ

HEAT RECOVERY OF INDUSTRIAL AIR SCREW COMPRESSOR

**Adem BUREKOVIĆ, Almir MUJIĆ, Adnan MEŠINOVIĆ, Mona NEMER, Rejhana ĐAKOVAC,
Sumeja LEPIĆ, Berina Delalić-Gurda, Nijaz Delalić, Džana KADRIĆ, Edin KADRIĆ**

17:00-17:30 KAFE PAUZA / COFFEE BREAK

17:30-18:30 *Posebna sesija: Procesni i upravljački aspekti unapređenja energetske efikasnosti industrijskih
procesu / Special Session: Process and control aspects of improving the energy efficiency of
industrial processes*

PREZENTACIJE RADOVA (10 min. sa diskusijom) / PAPER PRESENTATIONS (10 min. per lecture, with discussion)

UPRAVLJANJE AKTIVNIM ISPRAVLJAČEM KAO VIRTUELNOM SINHRONOM MAŠINOM

Jovana GLUŠČEVIĆ, Mihailo TANASIĆ, Lepasava RISTIĆ, Milan BEBIĆ

**ANALIZA PRIMENE ENERGETSKIH FILTARA I DIGITALNE OBRADNE SIGNALA KOD AKTIVNOG
ISPRAVLJAČA**

Nemanja MILOŠEVIĆ, Lepasava RISTIĆ, JELENA ČERTIĆ

**PRIMENA TIPIČNIH STRATEGIJA UPRAVLJANJA POGONOM SA SINHRONIM MOTOROM SA
STALNIM MAGNETIMA U CILJU POSTIZANJA OPTIMALNIH PERFORMANSI**

Uroš MILOŠEVIĆ, Lepasava RISTIĆ, Mladen TERZIĆ

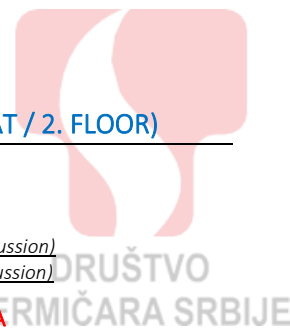
**ENERGETSKI PREGLED I MERE ZA POVEĆANJE ENERGETSKE EFIKASNOSTI INDUSTRIJSKIH
POSTROJENJA / ENERGY AUDIT IN SELECTED INDUSTRIAL COMPANY AND PROPOSED**

MEASURES FOR ENERGY EFFICIENCY IMPROVEMENTS

**Tomislav STEPANOVIĆ, Nikola KIJANOVIĆ, Lepasava RISTIĆ, Mirjana STAMENIĆ, Saša
MARKOVIĆ**

19:00 **SVEČANA VEČERA / DINNER CEREMONY**

(RESTAURANT AT THE 5th FLOOR OF THE FACULTY OF MECHANICAL ENGINEERING)



- 09:00-10:00 **Posebna sesija: Ventili, zatvarači, rešetke, cevovodi /
Special session: Valves, closures, grates, pipelines**
UVODNO IZLAGANJE (20 min. sa diskusijom) / INTRODUCTORY LECTURES (20 min. per lecture, with discussion)
PREZENTACIJE RADOVA (10 min. sa diskusijom) / PAPER PRESENTATIONS (10 min. per lecture, with discussion)
- THE NATIONAL STANDARD FOR VELOCIMETRY AND POSSIBILITIES FOR IT IN SERBIA**
Đorđe ČANTRAK, University of Belgrade, Faculty of Mechanical Engineering / Univerzitet u Beogradu, Mašinski fakultet, Beograd, *Serbia*
- EXPERIMENTAL AND NUMERICAL INVESTIGATION OF BALL VALVE CHARACTERISTICS**
Milan RAKOVIĆ, Lazar LEČIĆ, Aleksandar ČOČIĆ, Novica JANKOVIĆ
- CONTROL VALVES TRIM DESIGN, RETROFITTING AND TESTING**
Đorđe ČANTRAK, Ljubomir SAVIĆ, Novica JANKOVIĆ, Dejan ILIĆ
- NEINVAZIVNA SANACIJA OŠTEĆENIH CEVOVODA U VODOVODNIM SISTEMIMA**
Aleksandar STOJANOVIĆ
- ODVODNJAVANJE MULJA IZ KANALIZACIONE OTPADNE VODE POMOĆU VIJČANE PRESE**
Nemanja RADIĆ, Nebojša RADIĆ
- 10:00-10:30 **PREZENTACIJA SPONZORA / PRESENTATION OF SPONSOR – SIEMENS Energy d.o.o., Beograd**
PETAR TATOMIROVIĆ: HIGH-TEMPERATURE HEAT PUMPS
- 10:30-11:00 KAFE PAUZA / COFFEE BREAK
- 11:00-13:00 **Energetska efikasnost i energetska menadžment u zgradarstvu i daljinskom grejanju /
Energy efficiency and energy management within building and in district heating system**
UVODNO IZLAGANJE (20 min. sa diskusijom) / INTRODUCTORY LECTURES (20 min. per lecture, with discussion):
PREZENTACIJE RADOVA (10 min. sa diskusijom) / PAPER PRESENTATIONS (10 min. per lecture, with discussion):
- FUTURE ENERGY PATHWAYS FOR A UNIVERSITY CAMPUS CONSIDERING POSSIBILITIES FOR ENERGY EFFICIENCY IMPROVEMENTS**
Nataša NORD, Norwegian University of Science and Technology, Department of Energy and Process Engineering, Faculty of Engineering, *Norway*
- THERMAL ENERGY STORAGE FOR DATA CENTRE WASTE HEAT RECOVERY IN DISTRICT HEATING SYSTEMS**
Haoran LI, Juan HOU, Nataša NORD
- OPERATIONAL CHARACTERISTICS OF THE CHP PLANT IN THE DISTRICT HEATING SYSTEM OF BELGRADE**
Vladimir TANASIĆ, Nikola TANASIĆ, Mirjana STAMENIĆ
- PRIPREMNE AKTIVNOSTI ZA PROGRAM „ENERGETSKA EFIKASNOST U ZGRADAMA CENTRALNE VLASTI“**
Maja MATEJIĆ, Dragan UROŠEVIĆ
- DETEKCIJA TOPLOVODNE INFRASTRUKTURE TERMALNOM KAMEROM MONTIRANE NA BESPILOTNU LETELICU I TEHNOLOGIJOM SKENIRANJA GEORADAROM**
Aleksandar RISTIĆ, Željko BUGARINOVIĆ, Milan VRTUNSKI, Aleksandra RADULOVIĆ, Milka ŠARKANOVIĆ BUGARINOVIĆ
- EXPERIMENTAL ANALYSIS OF THE JUSTIFICATION OF USING A SPACE HEATING SYSTEM USING A PELTIER THERMOELECTRIC GENERATOR**
Milan PUPČEVIĆ, Petar GVERO, Čedomir ZELJKOVIĆ, Milovan KOTUR, Predrag MRŠIĆ
- INTERAKCIJA VAZDUHA I VODE TOKOM PUNJENJA CIJEVNOG SISTEMA POD PRITISKOM**
Vuko KOVIJANIĆ, Uroš KARADŽIĆ
- 13:00-13:30 **PREZENTACIJA SPONZORA / PRESENTATION OF SPONSOR**
- 13:30-15:00 RUČAK / LUNCH
- 15:00-16:30 **Zaštita životne sredine i održivi razvoj / Environmental protection and sustainable development**
UVODNO IZLAGANJE (20 min. sa diskusijom) / INTRODUCTORY LECTURES (20 min. per lecture, with discussion):
PREZENTACIJE RADOVA (10 min. sa diskusijom) / PAPER PRESENTATIONS (10 min. per lecture, with discussion):
- ATMOSPHERIC DISPERSION MODELING OF POLLUTANTS FROM COMBUSTION PLANTS**
Dušan TODOROVIĆ, University of Belgrade, Faculty of Mechanical Engineering / Univerzitet u Beogradu, Mašinski fakultet, Beograd, *Serbia*
- HYDROGEN PRODUCTION BY THERMAL CRACKING OF NATURAL GAS – TEST FACILITY**
Dragan STEVANOVIĆ, Judith SCHIMMEL, Tarek PHILIPPI

A THERMODYNAMIC ANALYSIS OF THE PROCESS OF HYDROGEN PRODUCTION BY NATURAL GAS DECOMPOSITION IN THE LOW-TEMPERATURE THERMAL PLASMA REACTOR

Nada MILUTINOVIĆ, Aleksandar ERIĆ, Dejan CVETINOVIĆ, Nikola ŽIVKOVIĆ, Jovana ANĐELKOVIĆ

SISTEM ZA PRAĆENJE KONCENTRACIJE PM_{2.5} ČESTICA BAZIRAN NA ARDUINO PLATFORMI I GIS

Milan VRTUNSKI, Aleksandr RISTIĆ, Dušan JOVANOVIĆ, Željko BUGARINOVIĆ

NUMERICAL SIMULATION OF WET FLUE GAS DESULPHURIZATION IN SPRAY ABSORBER

Milan PETROVIĆ, Vladimir STEVANOVIĆ, Sanja MILIVOJEVIĆ, Milica ILIĆ

CO₂ EMISSION REDUCTION BY USING CORN AS A RAW MATERIAL IN REFINED ALCOHOL PRODUCTION

Saša MARKOVIĆ, Branislav GAJIĆ, Srbslav GENIĆ

16:30-16:45 KAFE PAUZA / COFFEE BREAK

16:45-18:15 *Paralelna sesija - Energetska efikasnost energetski procesi i tehnologije (SALA 512) / Parallel Session - Energy efficiency and energy process and technologies (ROOM 512)*

PREZENTACIJE RADOVA (10 min. sa diskusijom) / PAPER PRESENTATIONS (10 min. per lecture, with discussion):

THIRD LIFE OF COAL POWER PLANTS ANALYSIS

Željko VLAOVIĆ, Borivoj STEPANOV, Aleksandar ANĐELKOVIĆ, Vladimir RAJS, Zoran ČEPIĆ, Marko JUROŠEVIĆ

EXPERIMENTAL RESEARCH OF ENERGY CHARACTERISTICS OF VAWT IN A WIND TUNNEL

Časlav MITROVIĆ, Goran VOROTOVIĆ, Jela BURAZER, Aleksandar BENGIN, Nebojša PETROVIĆ, Miloš JANUZOVIĆ

NOISE ANALYSIS OF 3-BLADED H-DARRIEUS TURBINE AT DIFFERENT ANGLES OF ATTACK

Marta TRNINIĆ, Vuk ADŽIĆ, Mirko DINULOVIC, Miloš JANUZOVIĆ, Jela BURAZER

ISPITIVANJE ZASNOVANO NA RIZIKU: STANDARDI I PERSPEKTIVE

Vladimir PILIĆ

THERMODYNAMIC EQUILIBRIUM MODELING OF THE THERMAL PLASMA GASIFICATION PROCESS USING ASPEN PLUS

Jovana ANĐELKOVIĆ, Dejan CVETINOVIĆ, Aleksandar ERIĆ, Nada MILUTINOVIĆ, Mirjana KJEVERANIN

16:45-18:15 *Paralelna sesija - Korišćenje obnovljivih izvora energije (SALA 211) / Parallel Session - The use of renewable energy sources (ROOM 211)*

UVODNO IZLAGANJE (20 min. sa diskusijom) / INTRODUCTORY LECTURES (20 min. per lecture, with discussion):

PREZENTACIJE RADOVA (10 min. sa diskusijom) / PAPER PRESENTATIONS (10 min. per lecture, with discussion):

SOLAR UPDRAFT TOWER TECHNOLOGY AS CLEAN AND RENEWABLE ENERGY SOURCE

Aleksandar ČOČIĆ, University of Belgrade, Faculty of Mechanical Engineering / Univerzitet u Beogradu, Mašinski fakultet, Beograd, *Serbia*

MODERN WOOD CHIPS COMBUSTION PLANTS – DESIGN, ACCEPTANCE TESTS AND EMISSION OF POLLUTANTS

Marko OBRADOVIĆ, University of Belgrade, Faculty of Mechanical Engineering / Univerzitet u Beogradu, Mašinski fakultet, Beograd, *Serbia*

FORECASTING SOLAR PHOTOVOLTAIC ENERGY PRODUCTION USING ARTIFICIAL NEURAL NETWORK

Budimirka MARINOVIĆ, Aleksandra ILJAČIĆ, Milica KAŠIKOVIĆ

MODELING THE OPERATING PARAMETERS OF THE COOLING TOWER USING THE METHOD RESPONSE SURFACES

Mona NEMER, Jusri DIZDAREVIĆ, Sajma GLEDO-MERDAN, Rejhana ĐAKOVAC, Sumeja LEPIĆ, Adem BUREKOVIĆ, Almir MUJIĆ, Adnan MEŠINOVIĆ, Berina DELALIĆ-GURDA, Nijaz DELALIĆ, Džana KADRIĆ, Edin KADRIĆ

UPOREDNA ANALIZA VARIJANTNIH REŠENJA PELTON TURBINE PRI REVITALIZACIJI MALOG HIDROAGREGATA DRUŠTVENOG TROŠENJA

Jelica PEŠIĆ, Ivan BOŽIĆ, Bogdan RISTIĆ

DEFINISANJE I PRORAČUN KRITERIJUMA ZA OPTIMIZACIJU ENERGETSKOG MIKSA UZ PRIMJENU MCDM METODA ZA PROCES NJEGOVE OPTIMIZACIJE

MRKIĆ-BOSANČIĆ, S. VASKOVIĆ, Petar GVERO

PRIMERI DOBRE PRAKSE - KORIŠĆENJE BIOMASE U REPUBLICI SRPSKOJ

Petar GVERO

PRIMERI DOBRE PRAKSE - MALE SOLARNE ELEKTRANE

Miloš KOSTIĆ

18:15-18:45 **ZATVARANJE KONFERENCIJE – ZAKLJUČCI / CLOSING – CONCLUSIONS (ROOM 211)**