



Mašinski fakultet
Podgorica

UNIVERSITY OF MONTENEGRO
Faculty of Mechanical Engineering

UNIVERSITY OF EAST SARAJEVO
Production and Management Faculty at Trebinje
Faculty of Mechanical Engineering



8th International Scientific Conference Research and development of mechanical elements and systems



CONFERENCE PROGRAM

Trebinje, September 2017

Organised by:

Asocijacija za Dizajn, Elemente i Konstrukcije
Association for Design, Elements and Constructions
Association für Design, Elementen und Konstruktionen



Partner organisations:



IFTToMM
International Federation
for the Promotion of
Mechanism and Machine
Science



Trebinje
Municipality
in Bosnia and Herzegovina



Power Utility of
Republic of Srpska



Mine and Thermal power
plant Gacko



Hydroelectric Power Plant at
Trebišnjica

UNIVERSITY OF MONTENEGRO
Faculty of Mechanical Engineering
UNIVERSITY OF EAST SARAJEVO
Production and Management Faculty Trebinje
Faculty of Mechanical Engineering

8th International Scientific Conference
Research and development of mechanical
elements and systems



CONFERENCE PROGRAM

MACHINE ELEMENTS AND SYSTEMS IN ENERGY SECTOR
DEVELOPMENT OF POWER PRODUCTION SYSTEMS

Trebinje, September 2017

8th INTERNATIONAL SCIENTIFIC CONFERENCE
”Research and development of mechanical
elements and systems“

IRMES 2017

“Machine elements and systems in energy sector
Development of power production systems”

Trebinje, Republic of Srpska, Bosnia and Herzegovina
September 7th - 9th, 2017

Organizer:

ADEKO
Association for Design, Elements and Construction

Host organizer:

Faculty of Mechanical Engineering
UNIVERSITY OF MONTENEGRO

Co-organizer:

Production and Management Faculty Trebinje,
Faculty of Mechanical Engineering
UNIVERSITY OF EAST SARAJEVO
REPUBLIC OF SRPSKA, BOSNIA AND HERZEGOVINA

Supported by:

IFTToMM
International Federation
for the Promotion of Mechanism and Machine Science

TREBINJE
Municipality in Republic of Srpska
Bosnia and Herzegovina

Reviewers

Prof.dr.-Ing., Milorad Burić, University of Montenegro, Montenegro
Prof.dr.-Ing., Milosav Ognjanović, University of Belgrade, Serbia
Prof.dr.-Ing., Lozica Ivanović, University of Kragujevac , Serbia
Prof.dr.-Ing., Radoslav Tomović, University of Montenegro, Montenegro
Prof.dr.-Ing., Biljana Marković, University of East Sarajevo, RS, BiH
Prof.dr.-Ing., Blaža Stojanović, University of Kragujevac , Serbia
Prof.dr.-Ing., Ranko Antunović, University of East Sarajevo, RS, BiH
Prof.dr.-Ing., Safet Isić, University Džemal Bijedić of Mostar, BiH
Prof.dr.-Ing., Janko Jovanović, University of Montenegro, Montenegro
Prof.dr.-Ing., Marina Mijanović Markuš, University of Montenegro, Montenegro
Prof.dr.-Ing., Radoš Bulatović, University of Montenegro, Montenegro
Prof.dr.-Ing., Uroš Karadžić, University of Montenegro, Montenegro
Prof.dr.-Ing., Mirko Blagojević, University of Kragujevac , Serbia
Doc.dr.-Ing., Milan Banić, University of Niš, Serbia
Doc.dr.-Ing., Milan Rackov, University of Novi Sad, Serbia
Doc.dr.-Ing., Radoje Vujadinović, University of Montenegro, Montenegro
Doc.dr.-Ing., Obrad Spaić, University of East Sarajevo, RS, BiH

International Scientific Committee

President:

Prof.dr.-Ing., Radivoje Mitrović, University of Belgrade, Serbia

Secretary:

Prof.dr.-Ing., Blaza Stojanovic, University of Kragujevac, Serbia

Members:

Prof. dr.-Ing. Marco Ceccarelli, IFToMM President, University of Cassino, Italy
Prof. dr.-Ing. Veniamin Goldfarb, Izhevsk State Technical University, Russia
Prof. dr.-Ing. Daizhong Su, Nottingham Trent University, United Kingdom
Prof. dr.-Ing. Dragan Marinković, Technische Universität Berlin, Germany
Prof. dr.-Ing. Manfred Zehn, Technische Universität Berlin, Germany
Prof. dr.-Ing. Dragan Đurđanović, University of Texas at Austin, USA
Prof. dr.-Ing. Vlado Lubarda, University of California, San Diego, USA
Prof. dr.-Ing. Miki Hondžo, University of Minnesota, USA
Prof. dr.-Ing. Victor E. Starzhinsky, National Academy of Sciences of Belarus
Prof. dr.-Ing. Aleksandar Subić, University of Technology, Melbourne, Australia
Prof. dr.-Ing. Pavan Kumar Kankar, Indian Institute of Information Technology, India
Prof. dr.-Ing. Prof. Ling Zhou, Hohai University, China

Prof. dr.-Ing. Miroslav Vereš, University of Technology in Bratislava, Slovakia
Prof. dr.-Ing. Mikael Möller, Lulea University of Technology, Sweden
Prof. dr.-Ing. Nikolai Balc, Technical University of Cluj-Napoca, Romania
Prof. dr.-Ing. Marian Borzan, Technical University of Cluj-Napoca, Romania
Prof. dr. Lucian Tudose, Technical University of Cluj-Napoca, Romania
Prof. dr.-Ing. Athanassios Mihailidis, Aristotle University of Thessaloniki, Greece
Prof. dr.-Ing. Vilmos Simon, Budapest University of Technology, Hungary
Prof. dr.-Ing. József Sárosi, University of Szeged, Hungary
Prof. dr.-Ing. Tamas Mankovits, University of Debrecen, Hungary
Prof. dr.-Ing. Ljubomir Dimitrov, Technical University of Sofia, Bulgaria
Prof. dr.-Ing. Jože Duhovnik, University of Ljubljana, Slovenia
Prof. dr.-Ing. Božidar Križan, University of Rijeka, Croatia
Prof. dr.-Ing. Vladeta Radović, University of Montenegro, Montenegro
Prof. dr.-Ing. Radoš Bulatović, University of Montenegro, Montenegro
Prof. dr.-Ing. Radoslav Tomović, University of Montenegro, Montenegro
Prof. dr.-Ing. Milorad Burić, University of Montenegro, Montenegro
Prof. dr.-Ing. Igor Vušanović, University of Montenegro, Montenegro
Prof. dr.-Ing. Bozidar Rosić, University of Belgrade, Serbia
Prof. dr.-Ing. Milosav Ognjanović, University of Belgrade, Serbia
Prof. dr.-Ing. Mileta Ristivojević, University of Belgrade, Serbia
Prof. dr.-Ing. Mirko Blagojević, University of Kragujevac, Serbia
Prof. dr.-Ing. Nenad Marjanović, University of Kragujevac, Serbia
Prof. dr.-Ing. Dragan Milčić, University of Niš, Serbia
Prof. dr.-Ing. Dušan Stamenković, University of Niš, Serbia
Prof. dr.-Ing. Vojislav Miltenović, University of Niš, Serbia
Prof. dr.-Ing. Sinisa Kuzmanović, University of Novi Sad, Serbia
Prof.dr.-Ing., Biljana Markovic, University of East Sarajevo, RS, BiH
Prof. dr.-Ing. Remzo Dedić, University of Mostar, BiH

International Programme Committee

President:

Prof.dr.-Ing., Radoslav Tomović, University of Montenegro, Montenegro

Secretary:

Dipl.-Ing. Žarko Mišković, M.Sc., University of Belgrade, Serbia

Members:

Prof. dr.-Ing. Radivoje Mitrović, University of Belgrade, Serbia
Prof.dr.-Ing., Safet Isić, University Džemal Bijedić of Mostar, BiH
Prof. dr.-Ing. Ljubomir Dimitrov, Technical University of Sofia, Bulgaria
Prof. dr.-Ing. Biljana Marković, University of East Sarajevo, RS, BiH

Prof. dr.-Ing. Adisa Vučina, University of Mostar, BiH
Prof. dr.-Ing. Uroš Karadžić, University of Montenegro, Montenegro
Prof. dr.-Ing. Janko Jovanović, University of Montenegro, Montenegro
Prof. dr.-Ing. Lozica Ivanović, University of Kragujevac, Serbia
Prof. dr.-Ing. Blaža Stojanović, University of Kragujevac, Serbia
Doc. dr.-Ing. Milan Tica, University of Banja Luka, RS, BiH
Doc. dr.-Ing. Milan Banić, University of Niš, Serbia
Doc. dr.-Ing. Milan Rackov, University of Novi Sad, Serbia
Doc. dr.-Ing. Radoje Vujadinović, University of Montenegro, Montenegro

Organizing Committee

President:

Prof.dr.-Ing., Radoslav Tomović, University of Montenegro, Montenegro

Secretary:

Ing. Vidosava Vilotijević, University of Montenegro, Montenegro

Members:

Prof. dr.-Ing. Igor Vušanović, University of Montenegro, Montenegro
Prof.dr.-Ing., Ranko Antunović, University of East Sarajevo, RS, BiH
Prof. dr. Dušan Jakanović, University of East Sarajevo, RS, BiH
Prof. dr.-Ing. Janko Jovanović, University of Montenegro, Montenegro
Doc. dr.-Ing. Zoran Stamenić, University of Belgrade, Serbia
Doc. dr.-Ing. Aleksandar Košarac, University of East Sarajevo, RS, BiH
Doc. dr. Blagoje Šupić, University of East Sarajevo, RS, Bosnia and Herzegovina
Doc. dr.-Ing. Budimirka Marinović, University of East Sarajevo, RS, BiH
Mr.-Ing. Luka Petrović, Municipality of Trebinje, RS, Bosnia and Herzegovina
Dipl.-Ing. Gordan Mišeljić, Hydroelectric Power Plant at Trebišnjica, RS, BiH
Dipl.-Ing. Ilija Tamindžija, Hydroelectric Power Plant at Trebišnjica, RS, BiH
Mr.-Ing. Boro Vujučić, Mine and Thermal Power Plant Gacko, RS, BiH
Ing. Marko Mumović, University of Montenegro, Montenegro
Ing. Aleksandar Tomović, University of Montenegro, Montenegro
Marko Radić, Tourist Organization of Trebinje, RS, BiH

General sponsors



***Power Utility of the Republic of
Srpska - Trebnje***



***Mine and Thermal Power Plant
Gacko***



***Hydroelectric Power Plant at
Trebišnjica – Trebinje***

Sponsors



***BerDiz Consulting AB
Göteborg - Sverige***



ANDRITZ HYDRO GmbH



***EMG Engineering Tomović
Nevesinje***



***TRC pro, d.o.o za inženjering i
usluge PETROVARADIN***

CONFERENCE PROGRAM

Thursday, 7 September 2017

CULTURAL CENTER TREBINJE

Address: Trg palih boraca 1, Trebinje

Time	Place	Activity
8:00 - 10:00	Entrance hall	Registration of the participants
10:00 - 11:00	Cinema hall	Conference Opening Ceremony
11:00 - 12:00	Entrance hall	Welcome Cocktail
12:00 - 13:30	Cinema hall	Plenary session - Introductory lectures: Vojislav MILTENOVIĆ, ROLE, IMPORTANCE AND MISSION OF ADEKO Milosav OGNJANOVIĆ, GEAR TRANSMISSION FAILURES AND FAILURE BASED DESIGN Petar V. VUKOSLAVČEVIĆ, THE INFLUENCE OF THE DESIGN FLOW RATE ON THE ECONOMICAL AND ECOLOGICAL ASPECTS OF SHP - SMALL HYDROPOWER PLANTS
13:30 - 16:00 FREE TIME		

Thursday, 7 September 2017

PRODUCTION AND MANAGEMENT FACULTY TREBINJE

Address: Stepe Stepanovica bb

Time	Place	Activity
16:00 – 18:00	Amphi-theater	1/3 - Mechanical Systems and Elements
	Room 2	1/2 - New Production Technologies and Materials
	Room 1	Hydro and Thermal Power Plants
18:00 - 18:15	Entrance hall	Coffee Break
18:15 - 20:00	Amphi-theater	Presentations of companies, products and equipment: 1. BerDiz Consulting AB , Göteborg – Sverige 2. TRC pro d.o.o za inženjering i usluge PETROVARADIN
20:00 - FREE TIME		

Friday, 8 September 2017

PRODUCTION AND MANAGEMENT FACULTY TREBINJE

Address: Stepe Stepanovica bb

Time	Place	Activity
09:00 - 11:00	Room 1	2/3 - Mechanical Systems and Elements
	Room 5	2/2 - New Production Technologies and Materials
	Room 2	Sustainable Development in the Energy Industry
11:00 - 12:00	Amphi-theater	Plenary session - Lectures by invitation: Klaus - Peter KAEMPER, MICRO SYSTEM TECHNOLOGY AND INDUSTRIAL APPLICATION - STATE OF THE ART AND CURRENT TRENDS
12:00 - 13:30	Amphi-theater	Panel - discussion: INDUSTRY 4.0 – POSSIBILITIES AND CHALLENGES FOR THE COUNTRIES OF THE REGION Moderators: 3. Prof. dr Radivoje MITROVIĆ, Faculty of Mechanical Engineering Belgrade; 4. Prof. dr Radoslav TOMOVIĆ, Faculty of Mechanical Engineering Podgorica; 5. Prof. dr Biljana MARKOVIĆ, Faculty of Mechanical Engineering East Sarajevo; 6. mr Luka Petrović, Mayor of Trebinje.
13:30 - 16:00 FREE TIME		

Friday, 8 September 2017

PRODUCTION AND MANAGEMENT FACULTY TREBINJE

Address: Stepe Stepanovica bb

Time	Place	Activity
16:00 – 17:30	Room 5	3/3 - Mechanical Systems and Elements
	Room 2	Power and Motion Transmission Systems
	Room 1	Mechanical Systems Monitoring and Maintenance
17:30 - 17:45	Entrance hall	Coffee Break
17:45 - 19:00	Amphi-theater	Presentations of companies, products and equipment: ANDRITZ HYDRO GmbH
19:00 - 20 FREE TIME		
19:00 - 20 Gala Dinner Hotel LEOTAR Address: Luke Vukalovica 1, Trebinje		

Saturday, 9 September 2017

PRODUCTION AND MANAGEMENT FACULTY TREBINJE

Address: Stepe Stepanovica bb

Time	Place	Activity
09:00 - 10:00	Amphitheater	Student Session
10:30 - 11:30	The venue is in front of the building of the HPP at Trebišnjica	Student Session - Competition CREATIVE DESIGN OF MINI HYDRO POWER PLANTS Evaluators: <ol style="list-style-type: none"> Prof. dr Mirko Blagojević, University of Kragujevac; Mr Boro Vujičić, Mine and Thermal Power Plant Gacko; Dipl.-Ing. Gordan Mišeljčić, Hydroelectric Power Plant at Trebišnjica.
12:00 - 13:00	Amphitheater	Closing remarks of the Conference CONFERENCE REPORT AND CONCLUSIONS Moderators: <ol style="list-style-type: none"> Prof. dr Radoslav TOMOVIĆ, Faculty of Mechanical Engineering Podgorica; Prof. dr. Dušan JOKANOVIĆ, Production and Management Faculty Trebinje; Prof.dr.-Ing., Ranko ANTUNOVIĆ, Faculty of Mechanical Engineering East Sarajevo
13:00 - 14:00	Room 1	ADEKO Association Meeting HOST PROPOSAL FOR THE NEXT „IRMES“ CONFERENCE Moderator: Prof. dr Radivoje MITROVIĆ , Faculty of Mechanical Engineering Belgrade

Saturday, 9 September 2017

PRODUCTION AND MANAGEMENT FACULTY TREBINJE

Address: Stepe Stepanovica bb

Time	Place	Activity
16:00 - 20:00	Meeting point is in front of the Production and Management Faculty Trebinje	<ul style="list-style-type: none">- Visit to Tvrđos Monastery (Orthodox Monastery in Trebinje)- Wine Tasting in Tvrđos Monastery- Sightseeing Trebinje- Visit to Hercegovačka Gracanica (Orthodox Church)

WORK IN SECTIONS

Thursday, 7 September 2017

Thursday, 7 September 2017		
Time	Place	Activity
16:00 – 18:00	Amphi-theater	1/3 - Mechanical Systems and Elements
		Chairpersons: Janko JOVANOVIĆ Jelena STEFANOVIĆ-MARINOVIĆ Milan RACKOV
<div>1. Samir DIZDAR, Radoslav TOMOVIĆ, Adisa VUČINA ROOT CAUSE ANALYSIS OF MICRO CRACKS OF HYDROGEN REFORMER HG</div> <div>2. Lubomir DIMITROV, Georgi DIMCHEV, Pancho TOMOV, Kiril NIKOLOV EXAMINATION OF ULTIMATE BENDING STRENGTH OF POWDER METALLUGRY GEARS</div> <div>3. Lucian TUDOSE, Cristina TUDOSE, Constantin URSACHE OPTIMAL PROFILES OF CYLINDRICAL ROLLERS OF ROLLING BEARINGS</div> <div>4. Amir Al-SAMMARRAIE, Dragan MILČIĆ, Milan BANIĆ, Sulaiman AL-BASAQR, Sabah SALIH COMPARABILITY OF EXERIMENTAL AND ANALYTICAL STUDY OFTHE EFFECT RADIAL LOAD AND ROTATION SPEED ON FRICTION COEFFICIENT OF RADIAL PLAIN BEARING UNDER LUBRICANT CONDITIONS USING RAIMONDI AND BOYD'S CHARTS</div> <div>5. Dečan IVANOVIĆ RELIABILITY OF NECESSARY PRESSURE FROM THE REQUIRED LIQUID QUANTITY FOR LUBRICATION OF ENGINE CYLINDER IN THE PERIOD OF ONE WORKING CYCLE FOR UNSTEADY FLUID FLOW</div> <div>6. Tibor POÓS, Dániel HORVÁTH, Kornél TAMÁSH THE COMPARE OF ANGLES OF REPOSE WITH DISCRETE ELEMENT METHOD AND MEASUREMENT</div>		

7. **Milan BANIĆ, Dušan STAMENKOVIĆ, Miloš MILOŠEVIĆ, Aleksandar MILTENOVIĆ**
DETERMINATION OF WEAR IN CONTACT OF WHEEL-RAIL SET USING FEM
8. **Vladimir JERZ**
DETERMINING THE BOUNDARIES OF PREDICTION INTERVALS IN SERVICE NETWORKS USING SIMULATION
9. **Ján DANKO, Tomáš MILESICH, Jozef BUCHA**
VEHICLE DRIVING SAFETY AND RIDE COMFORT IMPROVEMENT WITH MAGNETORHEOLOGICAL SHOCK ABSORBERS
10. **Jozef BUCHA, Ján DANKO, Tomáš MILESICH**
IMPACT OF THE SUSPENSION PARAMETERS ON THE VERTICAL DYNAMICS OF THE VW E-UP
11. **Bohumil KOTLARIK, Janka SULOVA, Zuzana FILOVÁ, Alena KOZAKOVA, Katarína KUBALOVÁ, Daša KRUPÉJOVÁ**
THE NEW METHOD OF INCREASING THE AMOUNT OF RESIN IN THE WINDING OF MOTOR

Thursday, 7 September 2017

Time	Place	Activity
16:00 – 18:00	Room 2	1/2 - New Production Technologies and Materials
		Chairpersons: Marina MIJANOVIĆ MARKUŠ Blaža STOJANOVIĆ Radoslav VUČUROVIĆ
<div>1. Mileta JANJIĆ, Milan VUKČEVIĆ DETERMINATION OF KINEMATIC STATE IN BULK METAL FORMING</div> <div>2. Ivan SOVILJ-NIKIĆ, Sandra SOVILJ-NIKIĆ, Bogdan SOVILJ, Vladimir BLANUŠA TOPOGRAPHY OF CHARACTERISTIC SURFACES OF MODEL HOB MILLING TOOLS FOR MACHINING OF GEAR SERRATION</div> <div>3. Andreja ILIĆ, Lozica IVANOVIĆ, Blaža STOJANOVIĆ, Danica JOSIFOVIĆ, Eleonora DESNICA IMPACT TOUGHNESS OF HIGH-STRENGTH LOW-ALLOY STEEL WELDED JOINTS</div> <div>4. Aleksija ĐURIĆ, Biljana MARKOVIĆ FAILURE MODE AND STRENGTH ANALYSES OF RESISTANCE SPOT WELD JOINTS OF ALUMINIUM AND AUSTENITIC STAINLESS STEEL SHEET</div> <div>5. Svetlana RISTESKA, Blagoja SAMAKOSKI, Vladimir DUKOVSKI ADVANCED FW AND AFP/ATL TECNOLOGIES FOR PRODUCTION OF COMPLEX PARTS OF COMPOSITE MATERIALS</div> <div>6. Jasmina BLAGOJEVIĆ, Zorica DJORDJEVIĆ, Sandra VELIČKOVIĆ APPLICATION OF TAGUCHI METHODS WITH OPTIMIZATION OF FIBRE ORIENTATION ANGLE OF LAMINATED AL/ARAMID/EPOXY COMPOSITE CARDAN SHAFT</div> <div>7. Saša ŽIVANOVIĆ RAPID PROTOTYPING AND MANUFACTURING FOR MODEL OF HUMAN HEAD</div>		

Thursday, 7 September 2017		
Time	Place	Activity
16:00 – 18:00	Room 1	Hydro and Thermal Power Plants
		Chairpersons: Safet ISIĆ Vladan IVANOVIĆ Radislav BRĐANIN
<div>1. Anton BERGANT, Jernej MAZIJ, Uroš KARADŽIĆ DESIGN OF WATER HAMMER CONTROL STRATEGIES IN HYDRPOWER PLANTS</div> <div>2. Milorad BURIC, Radoje VUJADINOVIĆ, Igor KRESOJEVIĆ, Slaviša ĐURIŠIĆ, Marko LUČIĆ THE NUMERICAL CALCULATION BIFURCATION A6 OF PIPELINE C3 AT HPP “PERUCICA”</div> <div>3. Darko SKUPNJAK, Milan VUKČEVIĆ ANALYSIS OF ECONOMIC JUSTIFICATION OF CONSTRUCTING A SMALL HYDRO POWER PLANT</div> <div>4. Branka GVOZDENAC UROŠEVIĆ, Budimirka MARINOVIĆ, Radislav BRĐANIN, Željko ĐURIĆ APPLICATION OF PROMETHEE METHOD AS SUPORT IN THE PLANNING PROCESS OF SMALL HYDROPOWER PLANTS</div> <div>5. Dragan MILČIĆ, Miodrag VELIMIROVIĆ, Miodrag MILČIĆ DEVELOPMENT OF WORK PLATFORMS FOR MAINTENANCE OF PENSTOCK HPP PIROT</div> <div>6. Miloš KRUNIĆ, Ivan BOŽIĆ NUMERICAL ANALYSES OF TRASH RACKS CHARACTERISTICS UNDER DIFFERENT EXPLOITATION CONDITIONS IN HYDROPOWER PLANTS</div> <div>7. Jovan ILIĆ, Ivan BOŽIĆ ANALYSIS OF TRANSIENTS IN HYDROELECTRIC POWER PLANTS FOR SPECIFICIED OPERATIONAL REGIMES</div> <div>8. Miroslav CRNČEVIĆ, Dragan ŽIVIĆ, Aleksandar GLIŠIĆ, Perica KRSTIĆ THE FIRST FLUE GAS DESULPHURIZATION PLANT FOR THE COAL-BURNING THERMAL POWER PLANTS IN SERBIA</div> <div>9. Ivana KECMAN, Mirko DOBRNJAC THERMODYNAMIC ANALYSIS OF SYSTEM OF LOW-PRESSURE HEATERS THERMO-ENERGY PLANT</div>		

Friday, 8 September 2017		
Time	Place	Activity
09:00 – 11:00	Room 1	2/3 - Mechanical Systems and Elements
		Chairpersons: Biljana MARKOVIĆ Ninoslav ZUBER Nebojša RAŠOVIĆ
<ol style="list-style-type: none">Radoš BULATOVIĆ, Janko JOVANOVIĆ, Radoslav TOMOVIĆ STATICAL ANALYSIS OF MEASUREMENTS IN A VEHICLE BRAKE TESTERLozica IVANOVIĆ, Andreja ILIĆ, Blaža STOJANOVIĆ, Jasna GLIŠOVIĆ, Miloš MATEJIĆ INFLUENCE OF LEAKAGE CLEARANCE ON PRESSURE VARIATION IN GEROTOR PUMP CHAMBERSMarko PENČIĆ, Maja ČAVIĆ, Milan RACKOV OPTIMAL SYNTHESIS OF THE ROBOT EYES DRIVE SYSTEM WITH 7 DOFsEmina PETROVIĆ, Miloš SIMONOVIĆ, Ivan ĆIRIĆ, Vlastimir NIKOLIĆ HUMAN ACTION RECOGNITION BY ROBOT VISION SYSTEM BASED ON KALMAN FILTER AND NEURAL NETWORK CLASSIFICATIONBoris STOJIC VIBRATION CHARACTERISTICS STUDY OF SELF-PROPELLED MACHINE FOR CORN SPRAYING AND DETASSELINGMilan VUKČEVIĆ, Nikola ŠIBALIĆ, Marina MIJANOVIĆ, Darko SKUPNJAK CAD/CAM INTEGRATION OF THE FORKED ROD DESIGN OF THE SERVICE ROBOT CONTROL MECHANISMNenad MILORADOVIĆ, Igor ANTIĆ, Rodoljub VUJANAC MODELLING AND CALCULATION OF A BELT CONVEYORRadoslav TOMOVIĆ DEVELOPMENT OF THE CONSTRUCTION FOR THE EXAMINATION OF ROLLING BEARINGS		

Friday, 8 September 2017		
Time	Place	Activity
09:00 – 11:00	Room 5	2/2 - New Production Technologies and Materials
		Chairpersons: Milan ZELJKOVIĆ Obrad SPAIĆ Milan BANIĆ
<div>1. Dalibor PETKOVIĆ, Miloš MILOVANČEVIĆ PREDICTION OF THE OPTIMAL MICRO HARDNESS AND CRYSTALLINE SIZE OF NANOSTRUCTURE VIA MACHINING AND NEURO-FUZZY TECHNIQUE</div> <div>2. Miloš MILOVANČEVIĆ, Dalibor PETKOVIĆ PREDICTION OF THE OPTIMAL MICRO HARDNESS AND CRYSTALLINE SIZE OF NANOSTRUCTURE VIA MACHINING AND NEURO-FUZZY TECHNIQUE</div> <div>3. Obrad SPAIĆ, Aleksandra KOPRIVICA, Mirjana JOKANOVIĆ, Srđan ĆURIĆ THE INFLUENCE OF THE INPUT PARAMETERS TO THE DIMENSIONAL ACCURACY OF THE 3D PRINTED PROTOTYPE</div> <div>4. Vladimir PUCOVSKI, Milenko SEKULIĆ, Marin GOSTIMIROVIĆ, Pavel KOVAČ, Borislav SAVKOVIĆ, Darko JOVANOVIĆ CUTTING FORCES DURING ULTRASONIC ASSISTED TURNING OF HARD TO MACHINE MATERIAL SPM10</div> <div>5. Gojko VLADIĆ, Dragoljub NOVAKOVIĆ, Nemanja KAŠIKOVIĆ, Neda MILIĆ, Sandra DEDIJER THE USE OF MODERN INFORMATION TECHNOLOGIES IN THE EDUCATIONAL PROCESS OF GRAPHIC ENGINEERS AND DESIGNERS</div> <div>6. Dragana ĐURAŠKOVIĆ, Mileta JANJIC LASERES WITH THE SOLID EASY AND THEIR APPLICATIONS FOR GRAVING ON TRANSPARENT MATERIALS</div>		

Friday, 8 September 2017		
Time	Place	Activity
09:00 – 11:00	Room 2	Sustainable Development in the Energy Industry
		Chairpersons: Ranko ANTUNOVIĆ Budimirka MARINOVIĆ Milan TICA
1.		Radivoje MITROVIĆ, Dragan JOVANOVIĆ, Gradimir IVANOVIĆ, Dragan STOŠIĆ, Snežana PANTELIĆ, Dragan STEVIĆ CONTEMPORARY APPROACH TO AUXILIARY MECHANIZATION OPERATIONS AND MAINTENANCE AT AN OPEN-PIT COAL MINE
2.		Dragan STOŠIĆ, Dragan STEVIĆ, Snežana PANTELIĆ, Nenad NIKOLIĆ, Rastko NEGOIČIĆ, Filip TODOROVI FUEL MANAGEMENT AT AUXILIARY MECHANIZATION OF OPEN-PIT COAL MINE SUPPORTED BY MODERN ICT
3.		Vladan IVANOVIĆ, Esad TOMBAREVIĆ CONTRIBUTION OF THERMAL POWER PLANT TO THE IMMISION OF PM10 IN THE CENTER OF PLJEVLJA
4.		Isak KARABEGOVIĆ APPLICATION OF NEW TECHNOLOGIES IN THE DEVELOPMENT AND INCREASE OF WIND POWER PLANT CAPACITY
5.		Mirjana JOKANOVIĆ, Dušan GOLUBOVIĆ, Blagoje ŠUPIĆ, Aleksandra KOPRIVICA APPLICATION OF RENEWABLE ENERGY SOURCES IN TERMS OF ECONOMIC, ENVIRONMENTAL AND SOCIAL SUSTAINABILITY
6.		Zdravko BIJELIĆ, Biljana MILANOVIĆ, Mijana JOVIŠIĆ, Bojan JELAČIĆ RESEARCH OF DEVELOPMENT AND PRODUCTION EFFECTS MACHINERY AND ELECTRIC SYSTEM FOR HYDRO POWER PLANTS ON THE BASIS OF ITS TECHNOLOGIES
7.		Stanka KULJIĆ, Uroš KARADŽIĆ HYDRAULIC ANALYSIS OF THE WATER SUPPLY SYSTEM IN TOWN NEVESINJE
8.		Beno ARBITER, Filip KOKALJ, Aleksandar JOVOVIĆ, Niko SAMEC SIMPLIFIED EQUILIBRIUM MODEL FOR BIOMASS AND WASTE GASIFICATION
9.		Borivoje VUJIČIĆ, Ženja VUJOVIĆ ANALYSIS COMBUSTION LIGNITE OF GACKO IN THE STEAM BOILER P - 64

Friday, 8 September 2017		
Time	Place	Activity
16:00 – 17:30	Room 5	3/3 - Mechanical Systems and Elements
		Chairpersons: Dragan MILČIĆ Lozica IVANOVIĆ Nikola ŠIBALIĆ
<ol style="list-style-type: none">Biljana MARKOVIĆ, Lozica IVANOVIĆ, Aleksija ĐURIĆ PRODUCT DEVELOPMENT PROCESS REGARDING TO CUSTOMER EMOTIONALNenad MARJANOVIĆ, Nenad KOSTIĆ, Nenad PETROVIĆ, Mirko BLAGOJEVIĆ, Miloš MATEJIĆ A NEW MODIFICATION OF GENETIC ALGORITHM FOR SOLVING ENGINEERING OPTIMIZATION PROBLEMSSaša RANDELOVIĆ, Dejan MOVRIN, Mladomir MILUTINOVIĆ, Srđan MLADENOVIĆ, Vladislav BLAGOJEVIĆ CONTERPORARY DESIGN AND RECONSTRUCTIVE ENGINEERING BY FDM METHODBranislav DIMITRIJEVIĆ, Milan BANIĆ, Žarko MIŠKOVIĆ, Radivoje MITROVIĆ, Aleksandar MILTENNOVIĆ, Miša TOMIĆ DETERMINATION OF MUSCLE TISSUE PROPERTIES FOR FEA APPLICATIONSInga KREŠIĆ, Nebojša RAŠOVIĆ ADJUSTED DESIGN OF A COMPUTER MOUSE WITH ERGONOMIC REQUIREMENTSDragiša SKOKO, Mileta RISTIVOJEVIĆ, Cvetko CRNOJEVIĆ EFFECTS OF OUTLET NOZZLE SLOPE ANGLE ON ACCURACY OF MACHINE PARTS' GEOMETRICAL CONTROLMilan TICA, Milan RACKOV, Djordje MILTENNOVIĆ, Aleksandar MILTENNOVIĆ, Milan BANIĆ CONCEPT SOLUTION OF THE SAFETY SYSTEM FOR AVOIDING WRONG FUEL USING IN CARS AND PREVENTION OF DAMAGE		

Friday, 8 September 2017		
Time	Place	Activity
16:00 – 17:30	Room 2	Power and Motion Transmission Systems
		Chairpersons: Milan VUKČEVIĆ Nenad MARJANOVIĆ Gojko KRUNIĆ
<div>1. Mileta RISTIVOJEVIĆ, Bozidar ROSIĆ, Aleksandar DIMIĆ THE INFLUENCE OF HELIX ANGLE ON THE LOAD CAPACITY OF CYLINDRICAL GEAR TEETH FLANKS</div> <div>2. Aleksandar ŽIVKOVIĆ, Milan ZELJKOVIĆ, Slobodan TABAKOVIĆ INFLUENCE TEMPERATURE ON STIFFNESS MATRIX FOR PAIRED (DUPLEX) ANGULAR CONTACT BALL BEARINGS</div> <div>3. Janko JOVANOVIĆ, Radoš BULATOVIĆ ON THE FRICTIONAL HEATING OF SPUR GEARS OPERATING UNDER LOW ROTATIONAL SPEEDS</div> <div>4. Ivana ATANASOVSKA, Saravanan KARUPPANAN, Santosh PATIL NEW METHODOLOGIES FOR GEAR DESIGN IN ENERGY EFFICIENT POWER TRANSMISSIONS</div> <div>5. Ivana ATANASOVSKA, Katica R. (STEVANOVIĆ) HEDRIH COMPARATIVE ANALYSIS OF VIBRO-IMPACT OSCILLATIONS OF SPUR GEAR PAIR FOR VARIATION OF GEARS TRANSMISSION RATIO</div> <div>6. Jelena STEFANOVIĆ-MARINOVIĆ, Sanjin TROHA, Miloš MILOVANČEVIĆ OPTIMAL SELECTION OF A TWO-SPEED TWO-CARRIER PLANETARY TRAIN</div> <div>7. Blaža STOJANOVIĆ, Saša RADOSAVLJEVIĆ, Sandra VELIČKOVIĆ, Slavica MILADINOVIĆ, Milan BUKVIĆ THE INFLUENCE OF LUBRICANT VISCOSITY ON THE EFFICIENCY OF WORM GEAR REDUCER</div> <div>8. Milan RACKOV, Mirko BLAGOJEVIĆ, Siniša KUZMANOVIĆ, Miloš MATEJIĆ, Ivan KNEŽEVIĆ, Maja ČAVIĆ, Marko PENČIĆ ANALYSIS OF THE TEETH NUMBER INFLUENCE ON THE GEAR MODULE SIZE AND LOAD CARRYING CAPACITY OF GEAR PAIR OF UNIVERSAL HELICAL GEAR DRIVES</div> <div>9. Vesna JELIĆ, Nataša SOLDAT, Zoran STAMENIĆ IMPROVING THE PERFORMANCE OF BALL ROLLER BEARINGS USING NEW MATERIALS</div>		

Friday, 8 September 2017		
Time	Place	Activity
16:00 – 17:30	Room 1	Mechanical Systems Monitoring and Maintenance
		Chairpersons: Milorad BURIĆ Uroš KARADŽIĆ Adisa VUČINA
<ol style="list-style-type: none">Radivoje MITROVIĆ, Dejan MOMČILOVIĆ, Ivana ATANASOVSKA DETERMINATION OF CRITICAL SIZE OF CORROSION PIT ON MECHANICAL ELEMENTS IN HYDRO POWER PLANTSMiodrag ARSIĆ, Srdan BOŠNJAK, Mladen MLADENOVIĆ, Zoranka MALEŠEVIĆ, Zoran SAVIĆ METHODOLOGY FOR THE REPAIR OF DAMAGES THAT OCCURRED ON THE WELDED JOINTS AT THE BODY OF GUIDE VANE APPARATUS VANES OF THE VERTICAL KAPLAN TURBINEDrakče TANASKOVIĆ, Branislav ĐORĐEVIĆ, Uroš TATIĆ, Aleksandar SEDMAK, Mirjana OPAČIĆ REPAIR WELDING OF GEAR SHAFTS OF SERVICE ROLLERS AT THE ŽELEZARA SMEDEREVODrakče TANASKOVIĆ, Branislav ĐORĐEVIĆ, Simon SEDMAK, Uroš TATIĆ, Marko GAJIN THE CASE OF UNSUCCESSFUL REPAIR WELDING OF A TREIBER ROLLSafet ISIĆ, Mensud ĐIDELIJA MAINTENANCE OF AXIAL BEARING OF KAPLAN TURBINENinoslav ZUBER CHALLENGES OF ROLLING ELEMENT BEARINGS FAULT DETECTION BASED ON VIBRATION SIGNAL MEASUREMENT AND ANALYSISRanko ANTUNOVIĆ, Nikola VUČETIĆ SELECTION OF RELIABLE VIBRODIAGNOSTIC MODEL ROTATION MACHINESEmir NEZIRIĆ, Safet ISIĆ, Edin DŽIHO VIBRATION ANALYSIS AND REPAIR PROCESS FOR THE VENTILATION SYSTEM FOR SMOKE DRAIN IN THE THERMAL POWER PLANT		

Saturday, 9 September 2017		
Time	Place	Activity
09:00 – 10:00	Amphi-theater	Student Session
		Chairpersons: Mirko BLAGOJEVIĆ Borivoje VUJIČIĆ Gordan MIŠELJIĆ
1.		Marko MUMOVIĆ, Aleksandar TOMOVIĆ, Vuk VUJOŠEVIĆ, Marko RAŠOVIĆ, Vasilije SAMARDŽIĆ, Nikola ČIRKOVIĆ, Radoslav TOMOVIĆ MINI HYDRO POWER PLANT BASED ON PELTON TURBINE
2.		Kenan PELKO, Edmin HAKALOVIC, Arnel MAKSUMIĆ, Muhamed GOSTO, Jasmina ŠENDRO, Safet ISIC CONSTRUCTION OF PELTONS MINI HYDROPOWER PLANT
3.		Enis HABUL, Armin MUŠIĆ, Muhamed GRAČIĆ, Sven BOREC, Mirsad BERBEROVIĆ, Emir NEZIRIĆ ACHIEVING LOW COST, HIGH EFFICIENCY PELTON TURBINE
4.		Ahmed TAJAR, Samir RUSTEMPAŠIĆ, Amir OMERAGIĆ, Sead IMAMOVIĆ, Alem KARAOSMANOVIĆ, Emir NEZIRIĆ HYDROTURBINE MADE FROM RECYCLED SCRAP MATERIALS
5.		Kenan STARČEVIĆ, Nihad BEŠIĆ, Izet AHMIČEVIĆ, Dragi TIRO MINI HYDRO POWER PLANT
6.		Aleksandar TOMOVIĆ, Vasilije SAMARDŽIĆ, Marko RAŠOVIĆ, Marko MUMOVIĆ, Vuk VUJOŠEVIĆ, Zoran MIJANOVIĆ CNC PLOTTER
7.		Slavoljub MARKOVIĆ, Dino TIHIĆ, Srđan ĐERIĆ, Biljana MARKOVIĆ DEVELOPMENT OF A THERMAL POWER PLANT TUBULAR BOILER CLEANING MACHINE
8.		Aleksandar TOMOVIĆ, Marko MUMOVIĆ, Vasilije SAMARDŽIĆ, Vuk VUJOŠEVIĆ, Marko RAŠOVIĆ, Marina MIJANOVIĆ MARKUŠ MOBILE NXT ROBOT THAT IS MANAGED VIA A BLUETOOTH CONNECTION
9.		Marko MUMOVIĆ, Vuk VUJOŠEVIĆ, Vasilije SAMARDŽIĆ, Aleksandar TOMOVIĆ, Marko RAŠOVIĆ, Zoran MIJANOVIĆ TRAINABLE ROBOTIC ARM
10.		Vasilije SAMARDŽIĆ, Vuk VUJOŠEVIĆ, Marko RAŠOVIĆ, Aleksandar TOMOVIĆ, Marko MUMOVIĆ, Marina MIJANOVIĆ MARKUŠ TACHOMETER BASED ON A HALL EFFECT

