



*University of Banja Luka*  
*Faculty of Mechanical Engineering*



# DEMI 2025

**17th International Conference on  
Accomplishments in Mechanical  
and Industrial Engineering**

## CONFERENCE PROGRAM



**MAŠINSKI  
FAKULTET  
PODGORICA**

**Banja Luka, 29–30 May 2025**



University of Banja Luka  
Faculty of Mechanical Engineering

**CONFERENCE PROGRAM**  
**DEMI 2025**

Banja Luka, May 2025

**17th International Conference on Accomplishments  
in Mechanical and Industrial Engineering**

**DEMI 2025**

**Supported by:**

MINISTRY FOR SCIENTIFIC AND TECHNOLOGICAL DEVELOPMENT AND  
HIGHER EDUCATION OF THE REPUBLIC OF SRPSKA

**Organizer and publisher:**

FACULTY OF MECHANICAL ENGINEERING  
UNIVERSITY OF BANJA LUKA

**Co-organizer:**

FACULTY OF MECHANICAL ENGINEERING  
UNIVERSITY OF NIŠ, Serbia

FACULTY OF MECHANICAL ENGINEERING  
UNIVERSITY OF PODGORICA, Montenegro

FACULTY OF TECHNICAL SCIENCES, REȘIȘTE  
BABES-BOLYAI UNIVERSITY OF CLUJ-NAPOCA  
ROMANIA

REYKJAVIK UNIVERSITY, Iceland

**For publisher:**

Full Prof. Darko Knežević, PhD

**Editor of chief:**

Assistant Professor Dejan Branković, PhD

**Executive editor:**

Milivoj Stipanović, BsC

## **ORGANIZING COMMITTEE**

Assist. Prof. Dejan Branković, PhD  
Chairman of Organizing Committee  
Faculty of Mechanical Engineering, University of Banja Luka

Assoc. Prof. Stevo Borojević, PhD  
Prof. Aleksandar Milašinović, PhD  
Prof. Zorana Tanasić, PhD  
Prof. Petar Gvero, PhD  
Assoc. Prof. Branislav Sredanović, PhD  
Assoc. Prof. Milovan Kotur, PhD  
Assist. Prof. Biljana Vranješ, PhD  
Assist. Prof. Jovan Škundrić, PhD  
Assist. Prof. Biljana Prochaska, PhD  
Assist. Prof. David C. Finger, PhD  
Prof. Uroš Karadžić, PhD  
Prof. Codruța-Oana HAMAT, PhD  
Assoc. Prof. Miloš Kocić, PhD  
Assist. Prof. Marko Mančić, PhD  
Vukašin Pavlović, Assistant, PhD  
Saša Laloš, Assistant, MSc  
Milisav Marković, Senior Assistant, MSc  
Danijela Kardaš, Senior Assistant, MSc  
Milan Pupčević, Senior Assistant, MSc  
Zoran Grahovac, Assistant, MSc  
Dragan Erceg, Senior Assistant, MSc  
Gordana Tošić, Senior Assistant, MSc  
Petar Babić, Senior Assistant, MSc  
Jelena Marković, Assistant, BSc  
Nikola Despenić, Assistant  
Vladimir Mitrović, Assistant  
Sanja Maglov, MA+  
Svetislav Bajić, BA Law  
Nedeljka Sladojević Putnik, BA Economics  
Milivoj Stipanović, BSc

## **SCIENTIFIC COMMITTEE**

Prof. Stevo Borojević, PhD, Faculty of Mechanical Engineering University of Banja Luka – Chairman of Scientific Committee

Prof. Zdravko Milovanović, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Darko Knežević, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Milan Tica, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Gordana Globočki-Lakić, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Petar Gvero, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Aleksandar Milašinović, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Zorana Tanasić, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Izet Bjelonja, PhD, Faculty of Mechanical Engineering University of Sarajevo;

Prof. Milan Zeljković, PhD, Faculty of Technical Sciences University of Novi Sad;

Prof. Slobodan Tabaković, PhD, Faculty of Technical Sciences University of Novi Sad;

Prof. Franci Pušavec, PhD, Faculty of Mechanical Engineering University of Ljubljana;

Prof. Mića Vukić, PhD, Faculty of Mechanical Engineering University of Niš;

Prof. Milenko Sekulić, PhD, Faculty of Technical Sciences University of Novi Sad;

Prof. Mileta Janjić, PhD, Faculty of Mechanical Engineering University of Montenegro;

Assist. Prof. Davorin Kramar, PhD, University of Ljubljana, Slovenia;

Prof. Simo Jokanović, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Platon Sovilj, PhD, Faculty of Technical Sciences University of Novi Sad;

Prof. Gordana Stefanović, PhD, Faculty of Mechanical Engineering University of Niš;

Prof. Miladin Stefanović, PhD, Faculty of Engineering Sciences University of Kragujevac;

Prof. Strain Posavljak, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Vid Jovišević, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Živko Babić, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Milan Banić, PhD, Faculty of Mechanical Engineering University of Niš;

Prof. Branko Blanuša, PhD, Faculty of Electrical Engineering University of Banja Luka;

Prof. Tihomir Latinović, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Sead Pašić, PhD, Faculty of Mechanical Engineering "Džemal Bijedić" University in Mostar;

Prof. Borut Kosec, PhD, Faculty of Natural Sciences and Engineering University of Ljubljana;

Senior Scient. Eng. Milica Grahovac, PhD, Lawrence Berkeley National Laboratory, USA;

Prof. Doina Frunzaverde, PhD, Faculty of Engineering Resita Babeş-Bolyai University;

Prof. Mihajlo Stojčić, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Assoc. Prof. Siniša Bikić, PhD, Faculty of Technical Sciences University of Novi Sad;

Assist. Prof. Esad Tombarević, PhD, Faculty of Mechanical Engineering University of Montenegro;

Prof. Valentina Golubović-Bugarski, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Snežana Petković, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Bojan Knežević, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Goran Janjić, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Mladen Todić, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Milovan Kotur, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Dragoslav Dobraš, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Đorđe Čiča, PhD, Faculty of Mechanical Engineering, University of Banja Luka;

Prof. Branislav Sredanović, PhD, Faculty of Mechanical Engineering, University of Banja Luka;

Assist. Prof. Dejan Branković, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Slobodan Lubura, PhD, Faculty of Electrical Engineering University of East Sarajevo;

Prof. Sanda Midžić – Kurtagić, PhD, Faculty of Mechanical Engineering University of Sarajevo;



Assoc. Prof. Srđan Vasković, PhD, Faculty of Mechanical Engineering  
University of East Sarajevo;

Prof. Vladimir Stojanović, PhD, Faculty of Mechanical Engineering  
University of Niš;

Prof. Milan Radovanović, PhD, Faculty of Mechanical Engineering  
University of Belgrade;

Prof. Dragoslava Stojiljković, PhD, Faculty of Mechanical Engineering  
University of Belgrade;

Prof. Nebojša Manić, PhD, Faculty of Mechanical Engineering University of  
Belgrade;

Prof. Milan Lečić, PhD, Faculty of Mechanical Engineering University of  
Belgrade;

Prof. Neven Duić, PhD, Faculty of Mechanical Engineering and Naval  
Architecture University of Zagreb;

Assist. Prof. Srđan Savić, PhD, Faculty of Technical Sciences University of  
Novi Sad;

Prof. Dejan Mitrović, PhD, Faculty of Mechanical Engineering University of  
Niš;

Prof. Goran Janevski, PhD, Faculty of Mechanical Engineering University of  
Niš;

Prof. Uroš Karadžić, PhD, Faculty of Mechanical Engineering University of  
Montenegro;

Prof. Deaconu Sorin, PhD, University Politehnica Timisoara, Romania;

Prof. dr Vinko Babić, PhD, Faculty of Mechanical Engineering University of  
Banja Luka;

Prof. Goran Petrović, PhD, Faculty of Mechanical Engineering University of  
Niš;

Prof. Radoje Vujadinović, PhD, Faculty of Mechanical Engineering  
University of Montenegro;

Assist. Prof. David C. Finger, PhD, School of Science and Engineering  
University of Reykjavik, Iceland;

Assoc. Prof. Edin Berberović, PhD, Polytechnical Faculty University of Zenica;

Prof. Živojin Stamenković, PhD, Faculty of Mechanical Engineering University of Niš;

Prof. Miloš Simonović, PhD, Faculty of Mechanical Engineering University of Niš;

Prof. Predrag Živković, PhD, Faculty of Mechanical Engineering University of Niš;

Prof. Hasan Smajić, PhD, University of Applied Sciences Keln, Germany;

Prof. Mirjana Laković, PhD, Faculty of Mechanical Engineering University of Niš;

Prof. Jezdimir Knežević, PhD, CEO at MIRCE Academy, United Kingdom;

Prof. Radivoje Mitrović, PhD, Faculty of Mechanical Engineering University of Belgrade;

Prof. Vlastimir Nikolić, PhD, Faculty of Mechanical Engineering University of Niš;

Prof. Nenad T. Pavlović, PhD, Faculty of Mechanical Engineering University of Niš;

Prof. Codruța-Oana HAMAT, PhD, Faculty of Technical Sciences, REȘIȘTE, Romania;

Prof. Igor Vušanović, PhD, Faculty of Mechanical Engineering University of Montenegro;

Prof. Gelu Ovidiu Tirian, PhD, University Politehnica Timisoara, Romania;

Prof. Dejan Lukić, PhD, Faculty of Technical Sciences University of Novi Sad;

Prof. Saša Živanović, PhD, Faculty of Mechanical Engineering University of Belgrade;

Prof. Mijodrag Milošević, PhD, Faculty of Technical Sciences University of Novi Sad;

Prof. Vojislav Novaković, PhD, NTNU, Norway;

Prof. Milan Rackov, PhD, Faculty of Technical Sciences University of Novi Sad;

Prof. Mladomir Milutinović, PhD, Faculty of Technical Science, University of Novi Sad;

Prof. Dragan Milčić, PhD, Faculty of Mechanical Engineering University of Niš;

Prof. Radoslav Tomović, PhD, Faculty of Mechanical Engineering University of Montenegro;

Prof. Janko Jovanović, PhD, Faculty of Mechanical Engineering University of Montenegro;

Prof. Nebojša Radić, PhD, Faculty of Mechanical Engineering University of East Sarajevo;

Prof. Tomaž Berlec, PhD, Faculty of Mechanical Engineering University of Ljubljana;

Prof. Janez Kušar, PhD, Faculty of Mechanical Engineering University of Ljubljana;

Prof. Miodrag Hadžistević, PhD, Faculty of Technical Sciences University of Novi Sad;

Prof. Branko Štrbac, PhD, Faculty of Technical Sciences University of Novi Sad;

Prof. Peđa Milosavljević, PhD, Faculty of Mechanical Engineering University of Niš;

Prof. Jelena Šaković Jovanović, PhD, Faculty of Mechanical Engineering University of Montenegro;

Prof. Milija Krajišnik, PhD, Faculty of Mechanical Engineering University of East Sarajevo;

Prof. Ilija Ćosić, Emeritus, Faculty of Technical Sciences University of Novi Sad;

Prof. Mirko Soković, PhD, University of Ljubljana, Slovenia;

Prof. Miroslav Bobrek, PhD, Faculty of Mechanical Engineering University of Banja Luka;

Prof. Igor Budak, PhD, Faculty of Technical Sciences University of Novi Sad;

Prof. Žarko Čojbašić, PhD, Faculty of Mechanical Engineering University of Niš;

Assist. Prof. Ivan Grujić, PhD, Faculty of Engineering Sciences University of Kragujevac;

Assist. Prof. Nadica Stojanović, PhD, Faculty of Engineering Sciences University of Kragujevac;

Prof. Vladimir Jovanović, PhD, Faculty of Mechanical Engineering University of Belgrade;

Prof. Saša Randjelović, PhD, Faculty of Mechanical Engineering University of Niš

Prof. Dušica Pešević, PhD, University of Banja Luka, Faculty of Natural Sciences and Mathematics

CONFERENCE PROGRAM		
Thursday, 29th May		
TIME	PLACE	ACTIVITY
9.00 – 10.00	Hall	Participant Registration
10.00 – 10.30	Amphitheater	Conference Opening
Keynote Lectures:		
Jezdimir Knežević MIRCE Science: Functionability Engineering and Management		
Tomaž Berlec The Lean and Green Future: Simulate. Optimize. Transform.		
Vala Hjorleifsdottir Harnessing the Earth's heat: the evolution of geothermal District heating in Reykjavik		
12.00		

Thursday, 29th May		
	At 20.00 hours	
	Gala dinner “Hotel Fortuna”	
	Address: Rakovačkih rudara 12, 78000 Banja Luka Tel: 051 358 640	

14.00 – 18.00	<b>Work in Sections:</b>
	<b>Thursday, 29th May</b>

Work in Sections – Thursday, 29th May		
14.00 – 18.00	<b>Classroom</b>  <b>11</b>	<b>Section I</b> <b>PRODUCTION AND COMPUTER-AIDED TECHNOLOGIES</b>
		<b>Moderators:</b> Branislav Sredanović, PhD Saša Živanović, PhD

PRODUCTION AND COMPUTER-AIDED TECHNOLOGIES	
1.	CUTTING FORCE AND VIBRATION IN END MILLING PROCESS Sanel Gredelj, Ismet Fatkić
2.	TEMPERATURE MEASUREMENT DURING THE PROCESS OF WELDING TUBES USING THE TIG METHOD M. Mumović, N. Šibalić
3.	OPTIMIZATION OF MACHINE LEARNING MODEL FOR PREDICTION OF TOTAL OPERATION TIME IN TURNING OF AISI 304 A. Trajković, M. Madić
4.	PREDICTION OF SURFACE ROUGHNESS IN TURNING USING ARTIFICIAL NEURAL NETWORKS D. Marinković, L. Mejić, A. Živković, C. Mladenović, M. Knežev, A. Antić
5.	ANALYSIS OF SPECIFIC CUTTING FORCE IN TURNING OF 42CRMO4 STEEL M. Madić, M. Trifunović, J. Stanojković, D. Rodić, P. Janković
6.	ANALYSIS OF THE INFLUENCE OF EMULSION ON THE FLEXURAL MECHANICAL PARAMETERS OF FDM 3D-PRINTED PLA AND PLA+CF MATERIALS S. Novšak, A. Nahtigal, L. Tkalčec, K. Simerl, J. Stušek, E. Hozdić

7.	EFFECT OF INFILL DENSITY ON FLEXURAL PROPERTIES OF FDM 3D PRINTED POLYMER AND COMPOSITE MATERIALS N. Hodnik, M. Markelj, M. Gril, N. Draksler, A. Rogelj, E. Hozdić
8.	FEM ANALYSIS OF PUNCHING AND BLANKING TOOL S. Ranđelović, S. Mladenović, M. Trajković-Milenković, A. Zorić, N. Kostić
9.	RECONFIGURABLE CONTROL SYSTEM FOR MACHINE TOOLS WITH A SWITCHABLE KINEMATIC AND VARIABLE EXECUTION FLOW OF THE KINEMATIC ALGORITHM Z. Dimić, S. Živanović, J. Vidaković, A. Dević
10.	THE INFLUENCE OF DWELL TIME ON THE COLLECTED DATA DURING LINEAR DISPLACEMENT MEASUREMENTS OF MACHINE TOOLS A. B. Budimir, S. Tabaković, M. Zeljković, S. Živanović, Z. Dimić
11.	LAYOUT SCHEDULING IN FUNCTION OF MATERIAL FLOW VARIANT TYPE M. Gajanin, S. Borojević, D. Kramar, G. Jotić, M. Marković
12.	EXPERIMENTAL ANALYSIS OF NANO-FLUID BASED COOLING AND LUBRICATION INFLUENCE ON CUTTING FORCES IN MILLING B. Sredanovic, G. Globocki Lakic, D. Kozak, G. Simunovic
13.	ENERGY CONSUMPTION MODELLING AND OPTIMIZATION IN HIGH EFFICIENCY MILLING B. Sredanovic, D. Cica, J. Markovic, D. Vujasin, G. Mijuskovic
14.	STRATEGIC PROCESS PLANNING FOR PRISMATIC COMPONENTS: AN OPTIMIZATION APPROACH USING SOLIDCAM D. Božić, M. Milošević, J. Vukman, M. Đurđev, D. Lukić

Work in Sections – Thursday, 29th May		
14.00 – 18.00	Amphitheater	<b>Section II</b> <b>ENERGETICS AND THERMAL ENGINEERING</b>
		<b>Moderators:</b> Petar Gvero, PhD Jovan Škundrić, PhD

ENERGETICS AND THERMAL ENGINEERING	
1.	OCCURRENCE OF FATIGUE ON THE TURBINE AND HYDROMECHANICAL EQUIPMENT Srđan Bulatović, Vujadin Aleksić, Biljana Prochaska, Bojana Zečević
2.	ANALYSIS OF POTENTIAL AND CONCEPTUAL DESIGN OF A WIND FARM V. Vilotijević, A. Dubljević, U. Karadžić
3.	EMISSION OF NITROGEN OXIDES – REGULATION, REDUCTION AND CASE STUDY Luka Marinović, Dejan Mitrović
4.	THE EFFECT OF SLIDING WINDOW TECHNIQUE ON DECISION TREE TIME SERIES FORECASTING IN DISTRICT HEATING SYSTEM Milica Tasic, Ivan Ciric, Vladan Jovanovic, Marko Ignjatovic, Dejan Mitrovic
5.	TECO-ECONOMIC ANALYSIS AND ENHANCING ENERGY EFFICIENCY IN A RESIDENTIAL BUILDING M. Velemir Radović, D. Nikolić, N. Popović
6.	ENERGY EFFICIENCY ANALYSIS OF PUBLIC PRESCHOOL EDUCATION INSTITUTIONS M. Stanković, M. Mančić, M. Laković-Paunović, M. Rajić
7.	EMHD FLOW AND HEAT TRANSFER OF NANOFLUIDS THROUGH A POROUS MEDIUM WITH THERMAL RADIATION J. D. Petrović, M. Nikodijević Đorđević, M. Kocić, J. Bogdanović Jovanović, Ž. Stamenković
8.	EXAMINATION OF THE HUMIDITY OF WASTE AT THE NIS LANDFILL Ljubica Stojkovic, Dragoslav Pavlovic, Saša Pavlovic, Milan Grozdanovic, Vladan Jovanovic, Gradimir Cvetanovic



9.	ENERGY ANALYSIS OF THE PHOTOVOLTAIC APPLICATION ON THE SOLAR GREENHOUSES – CASE STUDY D. Nikolić, N. Jurišević, S. Jovanović, Z. Đorđević, M. Velemir-Radović
10.	ADVANCED SOLAR ENERGY SYSTEMS: CURRENT STATE AND OPTIMIZATION STRATEGIES – A COMPREHENSIVE REVIEW E. Stefanoska, S. Stavreva, I. Andreevski, P. Živković, B. Dimovski, S. Popovska-Vasilevska
11.	GEOHERMAL WATER CHEMISTRY IN ICELAND AND SERBIA: IMPLICATIONS FOR ENERGY AND ENVIRONMENTAL APPLICATIONS D. C. Finger, D. Đorđević, E. J. Asbjornsson, A. Mihajlidi, S. Sakan
12.	IMPROVEMENT OF RICE QUALITY BY APPLYING PROCESS OF PADDY PARBOILING F. Mojsovski, V. Mijakovski
13.	MULTIDIMENSIONAL FEASIBILITY ASSESSMENT MODELS ARE VITAL FOR THE SUCCESSFUL DEPLOYMENT OF PICO-SCALE HYDROPOWER TECHNOLOGY IN WATER INFRASTRUCTURE Bjarnhedinn Gudlaugsson, Bethany Marguerite Bronkema, Ivana Stepanovic, David C. Finger
14.	ESTIMATING HIGH HEATING VALUE OF SERBIAN COALS USING ULTIMATE ANALYSIS DATA Vladimir V. Jovanović, Mirko S. Komatina, Vasilije Manović
15.	CFD MODELING OF MICROPOLAR FLUID FLOW Miloš Kocić, Živojin Stamenković, Jelena Petrović, Veljko Begović
16.	A DETAILED PARAMETRIC ANALYSIS OF A STIRLING ENGINE COUPLED WITH A SOLAR DISH CONCENTRATOR Dimitrios N. Korres, Christos Sammoutos, Panagiotis Lykas, Saša R. Pavlović, Marko Peric, Evangelos Bellos
17.	DECADE ANALYSIS OF KOPAONIK WIND ENERGY POTENTIALS P. Živković, J. Podunavac, E. Stefanoska, S. Stavreva, G. Cvetanović, C. Barz
18.	ASSESSMENT OF THERMOPHYSICAL PROPERTIES OF NATURAL GAS / HYDROGEN BLENDS FOR INDUSTRIAL APPLICATIONS J. Podunavac, N. Tomić, P. Gruborović, M. Tomić, A. Anđelković, M. Kotur
19.	INFLUENCE OF CROSSWIND INTENSITY ON THE PERFORMANCE OF AIR-COOLED CONDENSER J. Škundrić, I. Mujanić, D. Knežević, S. Laloš, M. Lazarević, D. Đurica

20.	EXPERIMENTAL DETERMINATION OF SMALL FLOW RATES INSIDE HYDRAULIC COMPONENTS D. Knežević, S. Laloš, J. Škundrić, A. Kenjić
21.	HYDROPOWER RESERVOIR INFLOW FORECASTING USING TIME SERIES NEURAL NETWORKS B. Marinović, M. Kašiković, A. Anđelković
22.	THE LCA ANALYSIS OF A SOLAR THERMOELECTRIC COOLING AND HEATING SYSTEM M. B. Pupčević, S. Papuga, M. Kotur, B. Knežević, M. Pokusova, D. Erceg
23.	SIMULATION BASED ASSESSMENT OF UNUTILIZED PERFORMANCE OF AN INSTALLED ROOFTOP PHOTOVOLTAIC SYSTEM M. Mantic, M. Rajic, M. Lakovic, M. Djordjevic, M. Petronijevic, L. Pantic
24.	A PRELIMINARY ASSESSMENT OF ENERGY RETROFITTING FOR SINGLE-FAMILY HOUSES IN MONTENEGRO Esad Tombarević, Milan Šekularac
25.	OPTIMIZATION OF ENERGY CONSUMPTION IN THE PROCESS INDUSTRY BY APPLYING THE CRITICALITY ASSESSMENT ALGORITHM D. Branković, Z. Milovanović
26.	ANALYSIS OF ENERGY EFFICIENCY OF BUILDINGS IN MONTENEGRO USING MEEC SOFTWARE J. Ćirković, M. Šekularac, E. Tombarević

Work in Sections – Thursday, 29th May		
15.00 – 18.00	Classroom <b>21</b>	<b>Section III</b> <b>MECHANICS AND DESIGN</b>
		<b>Moderators:</b> Radoslav Tomović, PhD Tihomir Mačkić, PhD

MECHANICS AND DESIGN	
1.	DIAGNOSIS OF IDLER FAULTS UTILIZING SHORT-TIME FOURIER TRANSFORM AND CONVOLUTIONAL NEURAL NETWORKS M. Milovančević, S. Stojičić, M. Miljanović, N. Simonović, D. Trnavac
2.	WORKBENCH FOR VIBRATION TESTING OF ROLLING BEARINGS Radoslav Tomović, Aleksandar Tomović
3.	USAGE OF PLANETARY GEAR TRAINS IN WIND TURBINE POWER TRANSMISSIONS J. Stefanović-Marinović, S. Troha
4.	IMPACT OF A CUSTOMIZED SHAPE FUNCTION ON THE PREDICTION OF VIBRATIONS IN COMPOSITE LAMINATES USING SHEAR DEFORMATION THEORY A. Radaković, D. Čukanović, G. Bogdanović, A. Nešović, P. Knežević, N. Velimirović
5.	HYDRODYNAMIC AND STRUCTURAL ANALYSIS OF AN OSCILLATING UNDERWATER ENERGY HARVESTER IN RIVER FLOW CONDITIONS C. Pareja, D. Finger, J. Rosselló
6.	COMPARATIVE ANALYSIS OF THE ANALYTICAL AND NUMERICAL MODELS FOR DIFFERENT TYPES OF BEAM-TOCOLUMN CONNECTION M. Piskulic, R. Vujanac, A. Perovic, Z. Djordjevic, M. Blagojevic, N. Miloradovic
7.	COMPARATIVE ANALYSIS OF APPLICATIONS OF DIFFERENT STORAGE SYSTEMS N. Miloradović, R. Vujanac
8.	ANALYSIS OF THE STRESS-STRAIN STATE OF A COMPOSITE PRESSURE VESSEL I. Golubović, Z. Djordjević, S. Kostić, D. Nikolić

9.	INFLUENCE OF KERR'S ELASTIC FOUNDATION ON FREE VIBRATION OF FUNCTIONALLY GRADED PLATE G. Bogdanović, D. Čukanović, A. Radaković, P. Knežević
10.	THE INFLUENCE OF THE MOUNTING WAY AND ORIENTATION OF UNIVERSAL GEARED MOTOR REDUCERS WITH EXTERNAL HELICAL GEARS ON THE LOAD OF FOUNDATION BOLTS M. Rackov, M. Tica, I. Knežević, S. Kuzmanović
11.	ANALYSIS OF ACOUSTIC EMISSION GENERATED BY DYNAMIC DISTURBANCES IN THE MECHANICAL SYSTEM V. Golubović-Bugarski, S. Petković, G. Globočki-Lakić, G. Tošić, G. Jotić

Work in Sections – Thursday, 29th May		
14.00 – 18.00	<b>Laboratory for Automation</b>	<b>Section IV MECHATRONICS AND ROBOTICS</b>
		<b>Moderators:</b> Bojan Knežević, PhD

MECHATRONICS AND ROBOTICS	
1.	SPEED CONTROL OF A DC MOTOR BASED ON SYSTEM IDENTIFICATION D. Erceg, B. Z. Knežević, Z. Grahovac, M. Pupčević, R. Al Afif
2.	AI-BASED ROBOT VISION ALGORITHM FOR FRUIT RIPENESS CLASSIFICATION N. Ivačko, D. Stojiljković, D. Jevtić, M. Simonović, I. Ćirić
3.	MECHATRONIC APPROACH TO THE DESIGN AND ANALYSIS OF A CARTESIAN ROBOT A. Osmanović, M. Čabaravdić, B. Knežević, J. Halilović, K. Varda, D. Erceg
4.	HYDRAULIC SYSTEM OF THE ACTIVE ABOVE-KNEE PROSTHESIS A. Tomovic, M. Damjanovic, R. Tomovic, N. Rasovic
5.	DEVELOPMENT OF A ROBOTIC EXPERT CHESS-PLAYING SYSTEM BASED ON THE MINIMAX ALGORITHM S. Savić, D. Erceg, B. Z. Knežević, S. Grujičić
6.	DESIGN OF REAL-TIME STEPPER CONTROLLER FOR 6DOF ROBOT ARM A. Dević, J. Vidaković, N. Živković, Z. Dimić

Work in Sections – Thursday, 29th May		
14.00 – 18.00	Classroom <b>19</b>	<b>Section V</b> <b>AUTOMOTIVE AND TRANSPORTATION ENGINEERING</b>
		<b>Moderators:</b> Aleksandar Milašinović, PhD Snežana Petković, PhD

AUTOMOTIVE AND TRANSPORTATION ENGINEERING	
1.	THE INFLUENCE OF THE SPOILER ON THE SPORT CAR AERODYNAMICS AND STABILITY N. Stojanović, A. Belhocine, Ž. Đurić, I. Grujić
2.	ANALYTICAL DETERMINATION OF THE INFLUENCE OF EXPLOITATION CONDITIONS OF THE ELECTRIC VEHICLE BATTERY CAPACITY BY THE APPLICATION OF THE TAGUCHI METHOD I. Grujić, Ž. Đurić, N. Stojanović
3.	THE INFLUENCE OF THE APPLICATION OF TRIBOLOGICAL INSERTS ON THE TEMPERATURE OF THE FRICTION PAIR (PISTON-CYLINDER) IN AN IC ENGINE Ž. Đurić, J. Glišović, I. Grujić, N. Stojanović, S. Petković, A. Davinić
4.	VEHICLE RIDE COMFORT: SUBJECTIVE & OBJECTIVE EVALUATIONS WITH ANN MODEL S. Mačužić Saveljić, I. Saveljić

Work in Sections – Thursday, 29th May		
14.00 – 18.00	Multimedial room	<b>Section VI</b> <b>QUALITY AND ECOLOGY</b>
		<b>Moderators:</b> Zorana Tanasić, PhD Tomaž Berlec, PhD

QUALITY AND ECOLOGY	
	PRESENTATION OF THE ERASMUS+ PROJECT „DIGITAL EDUCATION READINESS IN THE FIELD OF HIGHER EDUCATION – DERHE”, NO. 101128628 – DERHE – ERASMUS – EDU – 2023 – CBHE. G. Janjić
1.	REENGINEERING REAL ESTATE BUSINESS PROCESSES – THE ROLE OF AI IN QUALITY MANAGEMENT M. Rajić, P. Milosavljević, Z. Stanković, M. Tadić
2.	STRATEGIC INTEGRATION OF SWOT, PORTER'S FIVE FORCES, AND BLUE OCEAN STRATEGY FOR COMPETITIVE ADVANTAGE: A CASE STUDY ON STARTUPS IN SERBIA M. Rajić, Z. Stanković, P. Milosavljević, B. Maksimović
3.	INNOVATING THE BUSINESS MODEL AS A STRATEGY FOR BUSINESS IMPROVEMENT A. Kitić, M. Radišić, M. Rajić
4.	A LIFE CYCLE ASSESSMENT OF ENERGY HARVESTERS IN EUROPEAN WATER DISTRIBUTION NETWORKS: A CASE STUDY APPROACH B. Bronkema, B. Gudlaugsson, X. Escaler, D. Finger
5.	ENVIRONMENTAL IMPACT ASSESSMENT USING THE PROMETHEE METHOD M. Dragić, N. Suvajčević
6.	TPM AS A STRATEGIC TOOL FOR IMPROVING PRODUCTION PERFORMANCE – FLOW CHART Z. Tanasić, G. Janjić, M. Vuković, T. Berlec, N. Sremčev

7.	MODELING DECISION TREE IN DISASSEMBLY PLANNING OF END-OF-LIFE PRODUCTS D. Mlivić, Z. Kunica, N. Tomičić
8.	MULTICRITERIA ANALYSIS OF GLOBAL WARMING POTENTIAL IMPACT ON THERMAL INSULATION SELECTION: SCENARIOS AND SENSITIVITY ASSESSMENT Slobodan Peulić, Goran Janjić, Darija Gajić, Saša Čvoro
9.	APPLICATION OF ENGINEERING METHODS IN THE PRODUCTION PROCESS OF PRECISION MACHINE PARTS M. Vuković, N. Sremčev, Z. Tanasić, G. Janjić, B. Kosec
10.	MEASUREMENT ACCURACY ANALYSIS USING A COORDINATE MEASURING MACHINE G. Jotić, B. Štrbac, M. Ranisavljev, S. Borojević, M. Melichar, M. Hadžistević
11.	ENVIRONMENTAL AND MATERIAL OPTIMIZATION OF COMPRESSED HYDROGEN TRANSPORT FROM ICELAND TO THE UK Diego Augusto Costa, Bjarnhéðinn Guðlaugsson, Tariq Ahmed, Jinoop Arackal Narayanan, David Christian Finger
12.	WASTE-TO-ENERGY METHODS AT THE NIS LANDFILL M. Milošević, Lj. Stojković, A. Boričić, A. Milošević

Work in Sections – Thursday, 29th May		
14.00 – 18.00	Classroom <b>29</b>	<b>Section VII</b> <b>MATERIALS AND WELDING</b> <b>and</b> <b>MAINTENANCE OF ENGINEERING SYSTEMS AND</b> <b>OCCUPATIONAL SAFETY ENGINEERING</b>
		<b>Moderators:</b> Dragoslav Dobraš, PhD Mladen Todić, PhD

MATERIALS AND WELDING	
1.	ANALYSIS OF THE IMPACT OF FILLER MATERIAL QUALITY ON WELD SEAM PROPERTIES IN THE MAG WELDING PROCESS 101 Dragoslav Dobraš, Milisav Marković, Milan Marjanac
2.	THERMAL PROPERTIES OF CU-AL-NI-MN SHAPE MEMORY ALLOY 102 B. Karpe, B. Kosec, M. Bizjak, I. Ivanić, M. Gojić, A. Nagode
MAINTENANCE OF ENGINEERING SYSTEMS AND OCCUPATIONAL SAFETY ENGINEERING	
1.	THE IMPORTANCE OF TECHNICAL IMPROVEMENTS IN THE PREVENTION OF ACCIDENTAL SITUATIONS IN THE PROCESS INDUSTRY D. Branković, Z. Milovanović, B. Vranješ
2.	AN ANALYSIS OF HUMAN HAND-ARM VIBRATIONS ON THE EXAMPLE OF WORKERS' EXPOSURE TO VIBRATIONS IN ONE PRODUCTION COMPANY E. Ridžal, V. Golubović-Bugarski, B. Vranješ, G. Globočki-Lakić, M. Todić
3.	ANALYSIS OF THE CAUSES OF ACCIDENTS ON MEANS OF WORK IN A MINING COMPANY – A CASE STUDY B. Vranješ, D. Branković, Z. Milovanović, M. Todić, M. Vajkić, Lj. Figun
4.	VIBRATIONS AND NOISE AS INDICATORS OF DYNAMIC BEHAVIOUR OF MACHINE SYSTEM Neven Teinović-Čolić, Valentina Golubović-Bugarski, Milan Tica, Vladimir Risojević



Thursday, 29th May		
	at 20.00 hours	
	Gala dinner "Hotel Fortuna"	
	Address: Rakovačkih rudara 12, 78000 Banja Luka Tel: 051 358 640	

Friday, 30th May		
	at 10.00 hours	
	Panel Discussion "Energy Harvesters for Energy Poverty Solutions"	
	Multimedia room (Trondhajn)	

Conference Summary		
THE END		

