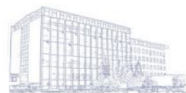




**THE 4<sup>th</sup> INTERNATIONAL CONFERENCE  
MECHANICAL ENGINEERING IN XXI CENTURY**



April 19-20, 2018  
Faculty of Mechanical Engineering in Niš

**CONFERENCE PROGRAMME  
“MECHANICAL ENGINEERING IN  
XXI CENTURY”**



**SPONSOR:**

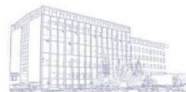


**Serbian Government**

**Ministry of Education, Science  
and Technological Development**



# THE 4<sup>th</sup> INTERNATIONAL CONFERENCE MECHANICAL ENGINEERING IN XXI CENTURY



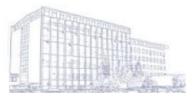
April 19-20, 2018  
Faculty of Mechanical Engineering in Niš

## CONFERENCE PROGRAMME OVERVIEW

	Thursday, April 19 <sup>th</sup> , 2018	Friday, April 20 <sup>th</sup> , 2018
9 <sup>00</sup> – 10 <sup>00</sup>	Registration	
10 <sup>00</sup> – 10 <sup>30</sup>	Official opening of the Conference (Amphitheatre A)	<b>Ceremonious room (611)</b> Mechatronics and control II <b>Amphitheatre B</b> Mechanical design, development and engineering II <b>Small Hall</b> Production and information technologies <b>608A</b> Theoretical and applied mechanics and mathematics <b>608B</b> Energetics, energetic efficiency and process engineering II <b>408</b> Traffic engineering, transport and logistics <b>401 (11<sup>00</sup> – 13<sup>00</sup>)</b> National Science Board for Mechanical Engineering and Industry Software
10 <sup>30</sup> – 11 <sup>00</sup>	Welcome Cocktail	
11 <sup>00</sup> – 13 <sup>00</sup>	Plenary Session (Amphitheatre A)	
13 <sup>00</sup> – 13 <sup>30</sup>		<b>Closing ceremony (Ceremonious room - 611)</b>
16 <sup>00</sup> – 19 <sup>00</sup>	<b>Ceremonious room (611)</b> Mechatronics and control I <b>Small Hall</b> Mechanical design, development and engineering I <b>401</b> Future of work, engineering and professional ethics in the era of globalization <b>608A</b> Energetics, energetic efficiency and process engineering I <b>608B</b> Engineering management	
18 <sup>30</sup> – 20 <sup>00</sup>	<b>Ceremonious room (611)</b> Assembly Meeting of Serbian Association for the Promotion of Mechanism and Machine Science (SATOmm)	
20 <sup>00</sup> –	<b>DINNER CEREMONY</b> (Crystal Light)	



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**Thursday, April 19<sup>th</sup>, 2018**

## **Amphitheater A**

**9<sup>00</sup> – 10<sup>00</sup>**      **Registration**  
**10<sup>00</sup> – 10<sup>30</sup>**      **Official opening of the Conference**  
**10<sup>30</sup> – 11<sup>00</sup>**      **Welcome Cocktail**

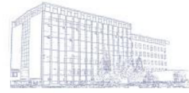
**11<sup>00</sup> – 13<sup>00</sup>**      **Plenary Session**

**Session Chairs:**      **prof. Ljiljana Radović**  
                                 **prof. Predrag Janković**

1. Rene THESKA, Lena ZENTNER, Christian WEBER, Philipp GRÄSER,  
Sebastian LINSS, Felix HARFENSTELLER  
State of the Art Precision Motion Systems Based on Compliant Mechanisms
2. Lauri LUOSTARINEN, Heikki HANDROOS  
Improving Human-Machine-Interface of Remote-Operated Mobile  
Machinery Using Haptic Feedback
3. Božo DESPOTOVIĆ, Tihomir MARSENIĆ, Dejan MARIĆ, Ivan SAMARDŽIĆ  
Corrosion Resistant Overlay Welding in Waste Incineration Boiler  
Manufacturing and Essential Variables of Overlay Welding
4. Dalibor PETROVIĆ  
The Ethics of Employee Surveillance in Context of Rapid ICT  
Development



## THE 4<sup>th</sup> INTERNATIONAL CONFERENCE MECHANICAL ENGINEERING IN XXI CENTURY



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### Ceremonious room – 611

Mechatronics and control I

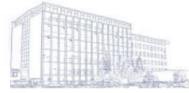
16<sup>00</sup>-18<sup>00</sup>

**Session Chairs:**                    **prof. Ljubomir Miladinović,**  
   **prof. Miloš Milošević**

1. Branislav POPKONSTANTINOVIĆ, Zorana JELI, Miša STOJICEVIĆ, Ivana CVETKOVIĆ, Boris KOSIĆ  
The Event Based Motion Study of the Mechanical Model of the Human Heart
2. Miša STOJICEVIĆ, Branislav POPKONSTANTINOVIĆ, Ivana CVETKOVIĆ, Ljubomir MILADINOVIĆ  
History of Escapement Mechanisms
3. Zorana JELI, Miša STOJICEVIĆ, Boris KOSTIĆ, Dragan PETROVIĆ  
Analysis of the 3D Model of the Pendulum of Clock Mechanism under the Influence of Temperature Change
4. Andrija MILOJEVIĆ, Sebastian LINß, Lena ZENTNER, Heikki HANDROOS  
A New Prismatic Crossed Leaf-Type Flexure Hinge Based on Topology Optimization with Discrete Beam Elements
5. Maja ČAVIĆ, Marko PENČIĆ, Milan RACKOV, Milan KOSTIĆ  
Structural Synthesis of the Plastic Cup Stacking Machine Mechanism – Application of the Intermittent Motion Mechanisms
6. Nenad T. PAVLOVIĆ, Nenad D. PAVLOVIĆ  
Design of Compliant Cognate Mechanisms
7. Stefan HENNING, Sebastian LINß, Lena ZENTNER  
Numerical Calculation of Compliant Four-Bar Mechanisms with Flexure Hinges
8. Dušan MILOŠEVIĆ, Mimica MILOŠEVIĆ, Ana STANOJEVIĆ, Violeta DIMIĆ, Aleksandra MILOŠEVIĆ  
Application of FAHP Method in the Process of Building Construction from the Aspect of Energy Efficiency
9. Miša TOMIĆ, Andrija MILOJEVIĆ, Heikki HANDROOS, Miloš MILOŠEVIĆ  
Development of the Conductive Graphite Foam Displacement Sensor Model by using Artificial Neural Network
10. Nevena TOMIĆ, Miloš MILOŠEVIĆ, Nenad D. PAVLOVIĆ  
Optimal Synthesis of the Wippkran Mechanism using Genetic Algorithm



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## “Small Hall”

16<sup>00</sup>-19<sup>00</sup>

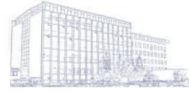
### Mechanical design, development and engineering I

**Session Chairs:**      **prof. Miroslav Živković,**  
   **prof. Dragan Milčić**

1. Biljana MARKOVIĆ, Dejan SAMARDŽIJA, Aleksija ĐURIĆ  
Influence Determination of Scanning Parameters on the Scanning Time Using  
Analysis of Variance on 3D Scanner Nextengine
2. Lidija JELIĆ, Vladimir MILOVANOVIĆ, Nikola JOVANOVIĆ, Miroslav ŽIVKOVIĆ  
Parametric Optimization of the Structures Using Finite Element Method
3. Stefan OGNJANOVIĆ, Vladimir MILOVANOVIĆ, Miroslav ŽIVKOVIĆ  
FEM Analysis of Welded Joints
4. Branislav DIMITRIJEVIĆ, Milan BANIĆ, Aleksandar MILTENOVIĆ, Milan TICA  
Simulation of Structural Damping
5. Milutin ŽIVKOVIĆ, Nikola KORUNOVIĆ  
Stress Analysis of Mining Chain Link Using Finite Element Method
6. Miroslav MIJAJLOVIĆ, Dušan ĆIRIĆ  
Two Way Coupled Fluid-Structure Interaction Analysis of the Grasshopper Fishing  
Lure's Movement in the Water
7. Mile SAVKOVIĆ, Goran PAVLOVIĆ, Jelena STANOJKOVIĆ, Nebojša  
ZDRAVKOVIĆ, Goran MARKOVIĆ  
Comparative Analysis and Optimization of Different Cross-sections of Crane Hook  
Subject to Stresses According to Winkler-Bach Theory
8. Nebojša ZDRAVKOVIĆ, Milomir GAŠIĆ, Mile SAVKOVIĆ, Goran MARKOVIĆ,  
Goran PAVLOVIĆ  
Eigenvalue Analysis for Transverse Vibration of Stepped Column with Lumped Mass  
at the Top by Finite Difference Approach
9. Goran PAVLOVIĆ, Mile SAVKOVIĆ, Nebojša ZDRAVKOVIĆ, Radovan  
BULATOVIĆ, Goran MARKOVIĆ  
Analysis and Optimization Design of Welded I-girder of the Single-beam Bridge Crane
10. Dragan MILČIĆ, Nikola LAZIĆ, Miodrag MILČIĆ, Vojkan NOJNER  
Software for V-Belt Drives Calculations
11. Milan RACKOV, Ivan KNEŽEVIĆ, Siniša KUZMANOVIĆ, Vojislav MILTENOVIĆ,  
Dragan MILČIĆ, Maja ČAVIĆ, Marko PENČIĆ, Josip TEMUNOVIĆ



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Comparison of Shaft Calculation Methods of Output Shafts in Universal Gear Units

## Hall “401”

16<sup>00</sup> – 19<sup>00</sup>

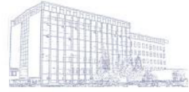
**Future of work, engineering and  
professional ethics in the era of globalization**

**Session Chairs: Miloš Tasić, Vladan Petrović**

1. Ljubiša MITROVIĆ  
The Treatment of Human Labour and the Problem of Motivation for Work in Countries in Transition
2. Vesna STANKOVIĆ PEJNOVIĆ  
Higher Education Reforms Under Globalisation
3. Božo MILOŠEVIĆ  
“Creative Industries” as a Strategic Necessity for the Accumulation of Capital in the New Liberal Key
4. Radoš RADIVOJEVIĆ, Sonja PEJIĆ  
Scientific and Technical Potential, Digitalization, and Social Change
5. Sonja PEJIĆ, Radoš RADIVOJEVIĆ  
Sociological View of Engineering Profession in Modern Society
6. Bogdan ĐUROVIĆ, Dragoljub B. ĐORĐEVIĆ  
Globalization, Neoliberalism and the Growing Disparity Between the Wealthy and the Poor
7. Alpar LOŠONC, Andrea IVANIŠEVIĆ  
Professional Ethics in Confrontation with the Dynamics of Work
8. Nidal SHABAN, Vladan PEŠIĆ, Eman KADHUM  
University Leadership Role in Effective Education for Sustainable Development
9. Dimitrije BUKVIĆ  
Globalization as an Opportunity for Old Crafts: the Case of a Sweet Shop in Belgrade



# THE 4<sup>th</sup> INTERNATIONAL CONFERENCE MECHANICAL ENGINEERING IN XXI CENTURY



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## Hall “608A”

16<sup>00</sup> – 19<sup>00</sup>

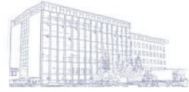
**Energetics, energetic efficiency and process engineering I**

**Session Chairs:      prof. Miloš Jovanović,  
                                 prof. Dečan Ivanović**

1. Dečan IVANOVIĆ  
Injection-Ejection Fluid Influence Through Different Accelerating Porous Surfaces on Unsteady 2D Incompressible Boundary Layer Characteristics
2. Saša MILANOVIĆ, Miloš JOVANOVIĆ, Vladislav BLAGOJEVIĆ, Boban NIKOLIĆ  
The Influence of Vertical Forces at Pneumatic Transport of Granular Material in Horizontal Channels of Noncircular Cross Sections
3. Miloš JOVANOVIĆ, Saša MILANOVIĆ, Boban NIKOLIĆ  
Spatially Periodic Temperature Modulation of Incompressible Fluid in Oberbeck-Bousinesq Approximation
4. Živojin STAMENKOVIĆ, Jasmina BOGDANOVIĆ-JOVANOVIĆ, Živan SPASIĆ, Miloš KOCIĆ and Jelena PETROVIĆ  
Optimization of Axial Pico Hydro Turbine
5. Jelena PETROVIĆ, Živojin STAMENKOVIĆ, Miloš KOCIĆ, Jasmina BOGDANOVIĆ-JOVANOVIĆ and Milica NIKODIJEVIĆ  
MHD Flow and Heat Transfer in the Porous Medium between Stationary and Moving Plate
6. Miloš KOCIĆ, Živojin STAMENKOVIĆ, Jelena PETROVIĆ, Milica NIKODIJEVIĆ  
EMHD Micropolar Fluid Flow and Heat Transfer in a Channel



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### “608B”

16<sup>00</sup> - 19<sup>00</sup>

#### Engineering management

**Session Chair: prof. Dušan Dobromirov  
prof. Peđa Milosavljević**

1. Dragan TEMELJKOVSKI, Vladan NIKOLIĆ, Stojanče NUSEV, Dragana TEMELJKOVSKI  
Knitting Plant Reengineering in the Textile Industry
2. Marjan LEBER, Peđa MILOSAVLJEVIĆ, Bisera KAJAKOVSKA, Robert OJSTERSEK  
Integrating the Business Excellence Model into Enterprise Innovation Processes
3. Milan KOLAREVIĆ, Vladan GRKOVIĆ, Aleksandra PETROVIĆ, Branko RADIČEVIĆ  
Statistical Control of the Assembly Process of Gun Cabinet
4. Miroslav FERENČAK, Mladen RADIŠIĆ, Dušan DOBROMIROV and Peđa MILOSAVLJEVIĆ  
Decision-Making under Ambiguity: The Case of Investment Process
5. Pedja MILOSAVLJEVIĆ, Milena RAJIĆ, Rado MAKSIMOVIĆ, Dragan PAVLOVIĆ, Miroslav FERENČAK, Marjan LEBER  
Material and Energy Flow in Industrial Environment
6. Dragan PAVLOVIĆ, Srđan MLADENOVIĆ  
Differences Between the Implementation of Lean Principles in SME and Large Companies

### Ceremonious room – 611

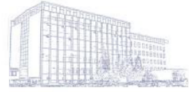
18<sup>30</sup>-20<sup>00</sup> **Assembly Meeting of Serbian Association for  
the Promotion of Mechanism and Machine Science (SAToMM)**

20<sup>00</sup> – **DINNER CEREMONY**





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**Friday, April 20<sup>th</sup>, 2018**

**Ceremonious room – 611**

**10<sup>00</sup>-13<sup>00</sup>**

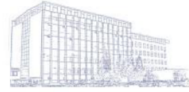
**Mechatronics and control II**

**Session Chairs: prof. Ivan Ćirić, prof. Miloš Simonović**

1. Danijela RISTIĆ-DURRANT, Haseeb MUHAMMAD ABDUL, Emami DAMON, Gräser AXEL  
Multimodal Sensor Fusion for Reliable Detection of Obstacles on Railway Tracks
2. Milica PETROVIĆ, Radiša JOVANOVIĆ, Zoran MILJKOVIĆ  
Fuzzy Particle Swarm Optimization Algorithm for Manufacturing Resource Scheduling
3. Dalibor PETKOVIĆ, Miloš MILOVANČEVIĆ  
Prediction of the Surface Roughness in Machining by Adaptive Neuro-Fuzzy Technique
4. Aca MICIĆ, Biljana ĐORĐEVIĆ  
Image Fusion in Mechatronic Applications
5. Jelena MANOJLOVIĆ  
Nanotechnology and Molecular Manufacturing
6. Marko MARKOV, Stevan STANKOVSKI, Gordana OSTOJIĆ, Igor BARANOVSKI, Sabolč HORVAT  
Application of Firebase Cloud Service for Storing and Analysing Data from IoT Mobile Devices
7. Milan PAVLOVIĆ, Vlastimir NIKOLIĆ, Ivan ĆIRIĆ, Miloš SIMONOVIĆ  
Advanced Edge Detection Techniques for Rail Track Detection Using Thermal Camera
8. Žarko ČOJBAŠIĆ, Milan RISTANOVIĆ, Stefan SAVIĆ, Nemanja MARKOVIĆ, Marina STOJILJKOVIĆ  
Metaheuristic Tuning of Building Heating Controller



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## “Small Hall”

10<sup>00</sup> -13<sup>00</sup>

### Production and information technologies

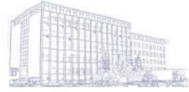
#### Session Chairs:

**prof. Miodrag Manić,**  
**prof. Mladimir Milutinović**

1. Nikola VITKOVIĆ, Miloš STOJKOVIĆ, Miroslav TRAJANOVIĆ, Jelena MILOVANOVIĆ, Milan TRIFUNOVIĆ, Miodrag MANIĆ, Jelena MITIĆ, Stojanka ARSIĆ, Karim HUSAIN  
Personalized 3D Model of Bone Scaffold Created by Application of Method of Anatomical Features
2. Petar S. ĐEKIĆ, Goran RADENKOVIĆ, Biljana MILUTINOVIĆ, Gordana STEFANOVIĆ  
Cost-Benefit Analysis of Modification of Recycling Rubber Powder
3. Jelena STANOJKOVIĆ, Miroslav RADOVANOVIĆ  
Selection of Indexable Milling Cutters Using Entropy and TOPSIS Multi Criteria Decision Method
4. Karim N. HUSAIN, Miloš STOJKOVIĆ, Mohammed M. RASHID, Nikola VITKOVIĆ, Miodrag MANIĆ, Jelena MILOVANOVIĆ, Nikola KORUNOVIĆ  
Digital Reconstruction of Large Missing Part of Mandible by Anatomically Shaped Scaffold
5. Jelena BARALIĆ, Bogdan NEDIĆ, Borivoje NEDELJKOVIĆ, Predrag JANKOVIĆ  
Wear of the Focusing Tube in Abrasive Water Jet Machining
6. Miloš MILOVANČEVIĆ, Dalibor PETKOVIĆ  
Prediction of the Power Consumption in Machining by Adaptive Neuro-Fuzzy Technique
7. Anđelija MITROVIĆ, Pavel KOVAČ, Jelena BARALIĆ, Nenad KULUNDŽIĆ  
Analysis of Influence of Depth of Cut on Cutting Temperature in Milling in Software Advantedge
8. Vladislav BLAGOJEVIĆ, Saša RANĐELOVIĆ, Saša MILANOVIĆ  
Experimental Model for Pneumatic Actuators Synchronization



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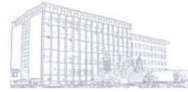


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9. Miloš MADIĆ, Miroslav RADOVANOVIĆ, Predrag JANKOVIĆ  
Mathematical Model for Laser Cutting Time Estimation
10. Saša RANĐELOVIĆ, Mladimir MILUTINOVIĆ, Vladislav BLAGOJEVIĆ,  
Dejan TANIKIĆ  
Nonlinear FEM Simulation of Extrusion Process
11. Mladimir MILUTINOVIĆ, Tomaž PEPELNJAK, Dragiša VILOTIĆ, Plavka  
SKAKUN, Dejan MOVRIN, Saša RANĐELOVIĆ  
Influence of Blank Shape to Material Formability in Stretch Forming
12. Dušan PETKOVIĆ, Miloš MADIĆ, Goran RADENKOVIĆ  
Application of Extended TOPSIS Method for Biomaterial Selection
13. Jovan ARANĐELOVIĆ, Pavle DRAŠKOVIĆ, Rajko TURUDIJA, Marko  
DIMITROV, Nikola BOŽIĆ, Nikola KORUNOVIĆ, Miroslav  
TRAJANOVIĆ  
Towards a Methodology for CAD program Efficiency Assessment



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### Hall “608A”

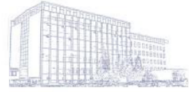
10<sup>00</sup> – 13<sup>00</sup>      **Theoretical and applied mechanics and mathematics**

**Session Chairs:**      **prof. Ljiljana Petković**  
   **prof. Predrag Kozić**

1. Nikola NEŠIĆ, Goran JANEVSKI, Predrag KOZIĆ  
Vibration of Damped Nonhomogeneous Cantilever Beam on Winkler Layer
2. Ljiljana PETKOVIĆ  
Computers in Mathematical Theory and Proofs
3. Nikola JOVIĆ, Dragan RAKIĆ, Miroslav ŽIVKOVIĆ  
Development and Implementation of Drucker-Prager Constitutive Model for Plane Strain Condition
4. Nikola NEŠIĆ, Dragan B. JOVANOVIĆ, Goran JANEVSKI  
Analysis of Natural Frequency in Beam with Multiple Cracks and General Boundary Conditions
5. Mihail HARALAMPIEV  
Durability of Polymers in High Mechanical Loads
6. Predrag RAJKOVIĆ, Miomir STANKOVIĆ, Slađana MARINKOVIĆ  
Problems in the Generalizations of the Laplace Transform
7. Melanija MITROVIĆ, Siniša CRVENKOVIĆ, Branislav M. RANDJELOVIĆ  
Constructive Semigroup with Apartness: Foundations of Order Theory – II
8. Dragan MARINKOVIC, Manfred ZEHN, Gil RAMA  
Interactive Simulations of Shell Structures
9. Carsten STRZALKA, Manfred ZEHN, Dragan MARINKOVIC  
Selective Model Order Reduction for Finite Element Based Fatigue Analyses
10. Biljana RADOVANOVIĆ DINIĆ, Predrag RAJKOVIĆ, Snežana TEŠIĆ  
RAJKOVIĆ  
How to Separate Inseparable Convex Hulls and Applications
11. Predrag MILIĆ, Dragan MARINKOVIĆ, Goran PETROVIĆ, Žarko  
ĆOJBAŠIĆ  
Modal Isogeometric Analysis of Thin Plates



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## Hall “608B”

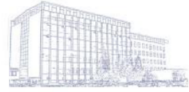
**10<sup>00</sup> — 13<sup>00</sup> Energetics, energetic efficiency and  
process engineering II**

**Session Chairs:                    prof. Mića Vukić  
   prof. Predrag Živković  
   prof. Mirko Stojilković**

1. Dragoljub ŽIVKOVIĆ, Milena RAJIĆ, Milan BANIĆ, Marko MANČIĆ, Branislav POPOVIĆ  
The Analysis of Thermo-Mechanical State of Steam Turbine Rotor in Non-Stationary Modes of Operation
2. Marko MANČIĆ, Dragoljub ŽIVKOVIĆ, Milan ĐORĐEVIĆ  
Optimisation of Polygeneration Systems with Utilization of Renewable Energy Sources
3. Milan ĐORĐEVIĆ, Marko MANČIĆ, Velimir STEFANOVIĆ  
A Parametric Study on Correlations for Heat Transfer in Helically Coiled Pipes
4. Rade KARAMARKOVIĆ, Vladan KARAMARKOVIĆ, Đorđe NOVČIĆ, Nenad STOJIĆ, Miloš NIKOLIĆ  
Energetic and Exergetic Analysis for Reconstruction of a Direct District Heating Substation
5. Milena N. RAJIĆ, Dragan B. JOVANOVIĆ, Dragoljub S. ŽIVKOVIĆ  
Transversal Deformations in Tube Plate of Reversal Chamber of the Hot Water Boiler
6. Milica LJUBENOVIĆ, Branislav STOJANOVIĆ, Jelena JANEVSKI, Marko IGNJATOVIĆ  
Effect of Thermal Mass on Dynamic Heat-Transfer Characteristics of Insulated Building Walls
7. Jelena JANEVSKI, Branislav STOJANOVIĆ, Mladen STOJILJKOVIĆ, Dejan MITROVIĆ, Aleksandar DEDIĆ  
The Influence of the Outside Air Temperature on the Energy Efficiency of Wood Dryers with Heat Recovery
8. Bojan OŽEGOVIĆ, Siniša SREMAC, Miloš KOPIĆ, Jelena HODAK  
Analysis of Infectious Medical Waste in Serbia



## THE 4<sup>th</sup> INTERNATIONAL CONFERENCE MECHANICAL ENGINEERING IN XXI CENTURY

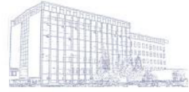


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9. Milica JOVIĆ, Mirjana LAKOVIĆ, Miloš BANJAC, Saša KALINOVIĆ, Ivan PAVLOVIĆ  
Comparative Advantages of Wood Biomass Compared to Other Fuels for Heating Households in Western Balkan
10. Dragana DIMITRIJEVIĆ JOVANOVIĆ, Predrag ŽIVKOVIĆ, Mladen TOMIĆ, Mića VUKIĆ, Petar MITKOVIĆ  
Influences of the Soil Layer on Extensive Green Roof Thermal Behavior
11. Predrag ŽIVKOVIĆ, Mladen TOMIĆ, Dragana DIMITRIJEVIĆ JOVANOVIĆ, Mića VUKIĆ  
Experimental Study of Rayleigh–Bénard Convection in a Rectangular Tank with Diesel



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## Hall “408”

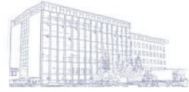
10<sup>00</sup> – 13<sup>00</sup>      **Traffic engineering, transport and logistics**

**Session Chairs:**      **prof. Boban Nikolić**  
   **prof. Dragan Marinković**

1. Nadica STOJANOVIĆ, Jasna GLIŠOVIĆ, Ivan GRUJIĆ, Aleksandar DAVINIĆ  
Thermal Loads of the Ventilated Brake Disc and Pads
2. Ivan GRUJIĆ, Jasna GLIŠOVIĆ, Nadica STOJANOVIĆ, Aleksandar DAVINIĆ,  
Miroslav PETROVIĆ  
Engine Vibration Analysis During the Combustion Process
3. Jovan PAVLOVIĆ, Dragoslav JANOŠEVIĆ, Boban ANDJELKOVIĆ, Vesna  
JOVANOVIĆ  
Models for Determining the Digging Resistance of Loaders
4. Muhamed HERIĆ, Edin CERJAKOVIĆ, Alan TOPČIĆ, Slađan LOVRIĆ  
Modeling and Simulation of Warehouse Busines in Prodcution System
5. Nikola PETROVIĆ, Jelena PETROVIĆ, Saša MARKOVIĆ, Vesna JOVANOVIĆ  
Performance Analysis of Bus Alternative Drive Technologies
6. Saša Milojević, Radivoje Pešić  
Challenges in City Transport - Alternative Fuels and Door to Door Model
7. Aleksandar STANKOVIĆ, Predrag RAJKOVIĆ, Goran PETROVIĆ  
Usage of Multicriteria Analysis for Selecting the Appropriate Host University to  
Study
8. Miomir JOVANOVIĆ, Goran RADOIČIĆ  
Modern Examination of Export Mining Machines
9. Vedran VUKŠIĆ, Sreten SIMOVIĆ, Tijana IVANIŠEVIĆ  
The Role and Importance of Information Technologies in Transport
10. Slavko VESKOVIĆ, Života ĐORĐEVIĆ, Marko VASILJEVIĆ, Sanjin  
MILINKOVIĆ, Željko STEVIĆ  
Monitoring of Malfunction of Railway Rolling Stock Regarding Wagon Usability and  
Traffic Safety
11. Slavko VESKOVIĆ, Gordan Stojić, Snježana RAJILIĆ, Sanjin MILINKOVIĆ,  
Marko VASILJEVIĆ  
Identification and Quantification of Criteria for Establishing the Business Balance of  
Railway Operators



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## Amphitheatre B

10<sup>00</sup> – 13<sup>00</sup>      **Mechanical design, development and engineering**

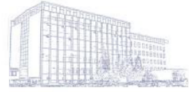
**Session Chairs:**      **prof. Biljana Marković**  
   **prof. Jelena Stefanović Marinović**

1. Oliver SLIVOSKI, Stojance NUSEV, Dragan TEMELJKOVSKI, Igor ANDREEVSKI  
Increasing Lifetime of the Die for Straw Pellets by Changing Existing Design
2. Dimitar KARAIVANOV, Magdalena VELYANOVA, Ventsislav BAKOV  
Kinematic and Power Analysis of Multi-Stage Planetary Change-Gears through the Torque Method
3. Jelena STEFANOVIĆ-MARINOVIĆ, Sanjin TROHA, Boban ANĐELKOVIĆ, Miloš MILOVANČEVIĆ, Branimir RONČEVIĆ  
Selection of the Appropriate Reversible Two-Carrier Planetary Gear Train
4. Amir ALSAMMARRAIE, Dragan MILČIĆ, Milan BANIĆ  
Predictions of Wear in Hydrodynamic Journal Bearing Using Artificial Neural Networks
5. Adel M. BASH, Amir ALSAMMARRAIE, Sulaiman E. AL-BASAQR, Sabah M. SALIH  
Study the Effect of Load, Sliding Speed and Sliding time on Dry Sliding Wear Rate and Wear Resistance of Carburized Mild Steels
6. Dušan STAMENKOVIĆ, Milan NIKOLIĆ, Ljubislav VASIN  
Tribological Aspect of Road Traffic Safety
7. Miodrag ARSIĆ, Srđan BOŠNJAK, Vencislav GRABULOV, Mladen MLADENOVIĆ, Bojan MEĐO, Zoran SAVIĆ  
Mechanical Properties of Steel API X60 Used for Welded Joints Created by Arc Welding
8. Miodrag MILČIĆ, Tomaž VUHERER, Igor RADISAVLJEVIĆ, Janez KRAMBERGER, Nataša ZDRAVKOVIĆ  
Influence of Kinematic Factors of Friction Stir Welding on the Characteristics of Welded Joints of Plates Made of EN AW-2024 T351 A Aluminium Alloy





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9. Nataša ZDRAVKOVIĆ, Boban ANĐELKOVIĆ, Vukašin PAVLOVIĆ,  
Miodrag MILČIĆ, Biljana ĐORĐEVIĆ, Milan PAVLOVIĆ  
Testing of Adhesive Bonds: a Review
10. Milan BIŽIĆ, Dragan PETROVIĆ, Vladimir SINĐELIĆ  
Application of Strain Gauges in Experimental Testing of Mechanical  
Structures
11. Erdinch RAKIPOVSKI, Borche RISTOVSKI, Tasko SMILESKI  
Improving Functional Parameters of Distributor Valve Type MH3F HBG 310

### Hall “401”

11<sup>00</sup> – 13<sup>00</sup>

**National Science Board for Mechanical  
Engineering and Industrial Software**

13<sup>00</sup>

**CLOSING CEREMONY**  
(Ceremonious room - 611)

