

## Conference PROGRAM

WEDNESDAY 17 May 2023			
Time	Activity		
09:00 – 10:00	Registration of the participants		
10:00 – 10:30	Opening of the Conference		
10:30 – 11:00	Welcome Cocktail		
11:00 – 13:00	Plenary Section		
	ADHESION AND FRICTION IN HARD AND SOFT CONTACTS <b><u>Valentin L. Popov, Qiang Li, Iakov Lyashenko</u></b>		
	DYNAMICAL SYSTEMS IN FICTION MODELS LINKING MICRO TO MACRO SCALE FRICTION <b><u>Motohisa Hirano</u></b>		
	A SURVEY OF RECENT COMPUTATIONAL APPROACHES FOR THE IN-SILICO WEAR DETERMINATION IN TOTAL HIP REPLACEMENTS CONSIDERING SYNOVIAL LUBRICATION EFFECTS AND MUSCULOSKELETAL DYNAMICS <b><u>Alessandro Ruggiero</u></b>		
	A BRIEF OVERVIEW OF RESEARCH IN NANOCOATINGS AND TRIBOCORROSION CONDITION MONITORING <b><u>Zulfiqar Khan</u></b>		
	STANDARDIZATION IN TRIBOLOGY <b><u>Lorena Deleanu, Constantin Georgescu, George Cătălin Cristea, Traian Florian Ionescu, Guglea Dionis, George Ghiocel Ojoc, Dumitru Dima, Iulia Paduraru</u></b>		
13:00 – 15:00	Lunch break		
15:00 – 16:45	<table border="1"><tr><td>Section A <i>(Building A, Room: A-I-13)</i></td><td>Section B <i>(Building A, Room: A-P-23)</i></td></tr></table>	Section A <i>(Building A, Room: A-I-13)</i>	Section B <i>(Building A, Room: A-P-23)</i>
Section A <i>(Building A, Room: A-I-13)</i>	Section B <i>(Building A, Room: A-P-23)</i>		
16:45 – 17:00	Coffee break		
17:00 – 19:00	<table border="1"><tr><td>Section A <i>(Building A, Room: A-I-13)</i></td><td>Section B <i>(Building A, Room: A-P-23)</i></td></tr></table>	Section A <i>(Building A, Room: A-I-13)</i>	Section B <i>(Building A, Room: A-P-23)</i>
Section A <i>(Building A, Room: A-I-13)</i>	Section B <i>(Building A, Room: A-P-23)</i>		
20:00	Conference Dinner <b><u>Restaurant Oranica</u></b> Address: Borivoja Glisica 25, Kragujevac <i>(location: See the map on the back cover)</i>		

# SERBIATRIB '23

18th International Conference on Tribology  
17-19 May 2023, Kragujevac, Serbia



<b>THURSDAY</b> <b>18 May 2023</b>		
<b>Time</b>	<b>Activity</b>	
09:00 – 10:45	<b>Section C</b> <i>(Building A, Room: A-I-13)</i>	<b>Virtual Section</b> <i>(via Zoom platform)</i>
10:45 – 11:00	<b>Coffee break</b>	
11:00 – 14:00	<b>Section C</b> <i>(Building A, Room: A-I-13)</i>	<b>Virtual Section</b> <i>(via Zoom platform)</i>
	<b>Poster Section</b> <i>(Building A-I)</i>	<b>Virtual Section</b> <i>(via Zoom platform)</i>
	<b>Virtual Section</b> <i>(via Zoom platform)</i>	

<b>FRIDAY</b> <b>19 May 2023</b>	
10:00 -	<p><i>Conference trip to</i></p> <p><b><u><a href="#">The Mausoleum of The Serbian Royal Family</a></u></b> <b><u><a href="#">St. George's Church, King Peter's House, King's Winery</a></u></b></p> <p><b><u><a href="#">Lunch at the Restaurant Rudnička dolina</a></u></b> <i>(location: See the map on the back cover)</i></p> <p><b>The price of the Conference trip is 40 €</b></p> <p><b>10:00 Departure from Faculty of Engineering</b> Transport: By bus</p>
<b>End of conference</b>	

WEDNESDAY 17 May 2023	Section A ( <i>Building A, Room: A-I-13</i> )
15:00 – 16:45	Chairmen: <b>Motohisa Hirano, Valentin L. Popov</b>
	THE MYSTERY AND CLARITY OF LEONARDO DA VINCI'S COEFFICIENT OF FRICTION <b>Sergey Fedorov</b>
	INVESTIGATION OF THE WEAR OF ALUMINIUM-SILICON ALLOYS TRIBOSYSTEMS UNDER REVERSIBLE FRICTION WITH LUBRICATION <b>Mara Kandeва, Boyan Dochev, Desislava Dimova, Mihail Zagorski, Plamen Kasabov, Ivan Panov</b>
	INVESTIGATION OF THE EFFECT OF HEAT TREATMENT ON THE MICROHARDNESS AND WEAR RESISTANCE OF AN ALLOY AISi18Cu3CrMn <b>Desislava Dimova, Boyan Dochev, Ivan Panov, Mara Kandeва</b>
	CONTACT OF AN ELASTIC QUARTER-SPACE WITH FREELY SLIDING SIDE <b>Qiang Li</b>
	APPLICATION OF THE FRACTAL GEOMETRY IN WEAR VOLUME CALCULATIONS AT MICRO SCALE <b>Nina Busarac, Nikola Kotorčević, Slobodan Mitrović, Dragan Adamović, Petar Todorović, Nenad Grujović, Fatima Živić</b>
	INFLUENCE OF PROFILE GEOMETRY ON FRICTIONAL ENERGY DISSIPATION IN A COMPLIANT, OSCILLATING STEEL-ON-STEEL CONTACT <b>Emanuel Willert</b>
	SPONSOR PRESENTATION – TRC PRO <b>Hotimir Ličen, Branislava Ličen</b>
16:45 – 17:00	<i>Coffee break</i>
17:00 – 19:00	Chairmen: <b>Iakov Lyashenko, Branko Škorić</b>
	POLYMERIC COMPOSITES. FAILURES IN DRY SLIDING ON STEEL <b>Lorena Deleanu, Alina Cantaragiu Cioromila, Constantin Georgescu, Mihail Botan, George Ghiocel Ojoc, Larisa Chiper Titire, Ioana Gabriela Chiracu</b>
	STUDY OF THE INFLUENCE OF COATING ROUGHNESS ON THE PROPERTIES AND WEAR RESISTANCE OF ELECTROSPARK DEPOSITED Ti6Al4V TITANIUM ALLOY <b>Todor Penyashki, Georgi Kostadinov, Mara Kandeва, Antonio Nikolov, Rayna Dimitrova, Valentin Kamburov, Pancho Danailov, Snezhan Bozhkov</b>
SURFACE CHARACTERISTICS, PROPERTIES AND WEAR RESISTANCE OF TiB2 BASED HARD-ALLOY COATINGS OBTAINED BY ELECTROSPARK DEPOSITION AT NEGATIVE POLARITY ON Ti6Al4V ALLOY <b>Todor Penyashki, Georgi Kostadinov, Mara Kandeва, Antonio Nikolov, Rayna Dimitrova, Valentin Kamburov</b>	

<b>WEDNESDAY</b> 17 May 2023	<b>Section A (<i>Building A, Room: A-I-13</i>)</b>
<b>17:00 – 19:00</b>	<p>TRIBOLOGICAL BEHAVIOR OF TiAIN AND NANOLAYERED TiAIN/TiSiN COATING TESTED AT HIGH TEMPERATURES <b>Vladimir Terek, Lazar Kovačević, Zoran Bobić, Branko Škorić, Aljaž Drnovšek, Miha Čekada, Peter Panjan, Pal Terek</b></p>
	<p>EFFECTS OF SURFACE ROUGHNESS ON RESULTS OF SCRATCH TEST OF DIFFERENT PVD HARD COATINGS <b>Zoran Bobić, Lazar Kovačević, Vladimir Terek, Branko Škorić, Atilla Csík, Miha Čekada, Pal Terek</b></p>
	<p>A REVIEW ON MECHANICAL AND TRIBOLOGICAL PROPERTIES OF ALUMINIUM-BASED METAL MATRIX NANOCOMPOSITES <b>Sandra Gajević, Slavica Miladinović, Dragan Džunić, Blaža Stojanović, Aleksandar Venci</b></p>

<b>WEDNESDAY</b> 17 May 2023	<b>Section B (<i>Building A, Room: A-P-23</i>)</b>
<b>15:00 – 16:45</b>	<p>Chairmen: <b>Aleksandar Marinković, Zulfiqar Khan</b></p>
	<p>OIL-AIR LUBRICATION OF RADially LOADED TAPERED ROLLER BEARINGS FOR HIGH SPEED OPERATIONS <b>Marcus Gärtner, Christian Brecher, Stephan Neus, Mark Franken, Maik Hoppert</b></p>
	<p>EXAMINATION OF THE TRIBOLOGICAL PROPERTIES OF ALUMINUM OXIDE AND CERIUM OXIDE NANOPARTICLES SURFACE-MODIFIED WITH ETHYL OLEATE <b>Ádám István Szabó, Álmos Dávid Tóth, Hajnalka Hargitai</b></p>
	<p>THE TECHNOLOGICAL FACTORS AND OPERATING CONDITIONS INFLUENCE ON THE MOLYBDENUM DISULFIDE COATINGS TRIBOLOGICAL PROPERTIES <b>Maksim Prozhega, Egor Reschikov, Egor Konstantinov</b></p>
	<p>THE ABILITY OF SPECTROMETRIC OIL ANALYSIS DIAGNOSTIC METHOD RESULTS TO ENHANCE METHOD CREDIBILITY AND USEFUL DATA ACQUISITION AGAINST EQUIPMENT FAILURES <b>Polychronis S. Dellis</b></p>
	<p>APPLICATION OF MXENE NANOSHEETS FOR IMPROVING MACHINE ELEMENTS PROPERTIES <b>Ivan Simonović, Aleksandar Marinković, Carsten Gachot, Pavle Ljubojević</b></p>
	<p>SOME OF THE EFFECTS OF THE BEHAVIOR OF PTFE IN BOUNDARY LUBRICATION CONDITIONS BASED ON EXPERIMENTAL RESEARCH ON GAS PIPELINE VALVES WITH THE POSSIBILITY OF SUPPLEMENTARY LUBRICATION <b>Željko Aleksić</b></p>
<b>16:45 – 17:00</b>	<i>Coffee break</i>

WEDNESDAY 17 May 2023	Section B ( <i>Building A, Room: A-P-23</i> )
17:00 – 19:00	Chairmen: <b>Alessandro Ruggiero, Dušan Stamenković</b>
	COMPARATIVE CALCULATION OF CYCLOID REDUCERS EFFICIENCY BETWEEN CLASSIC AND NON-PIN WHEEL CONCEPTS <b>Mirko Blagojević, Milan Vasić, Miloš Matejić</b>
	EFFECTIVE STRAINS DETERMINATION IN CONTINUOUS CONSTRAINED DOUBLE BENDING WITH ACTIVE FRICTION FORCES <b>Valentin Kamburov, Antonio Nikolov</b>
	EMPIRICAL MODELING METHODS OF TURNING PROCESS: A REVIEW <b>Jelena Stanojković, Miloš Madić, Dragan Lazarević</b>
	TRIBOLOGICAL INVESTIGATION OF THE EFFECT OF ALUMINUM ALLOY IN ACCORDANCE WITH CAST IRON LINER ON ENGINE WEAR <b>Emrullah Hakan Kaleli, Baycan Ocak</b>
	ARTICULAR CARTILAGE GROWTH AND SELF-MAINTENANCE – BIOLOGICAL BACKGROUND AND MECHANICAL MODELLING <b>Jean-Emmanuel Leroy</b>
	INVESTIGATION OF THE MICROGEOMETRY OF THE SURFACES OF AISi25Cu4Cr AND AISi25Cu5Cr ALLOYS AFTER TURNING <b>Plamen Kasabov, Boyan Dochev, Desislava Dimova, Mihail Zagorski, Georgiya Kamburova</b>
	ANALYSIS OF STATIC FRICTION OF SOLID AND VISCOELASTIC BODIES <b>Milan Nikolić, Dušan Stamenković, Milan Banić</b>

THURSDAY 18 May 2023	Section C ( <i>Building A, Room: A-I-13</i> )
09:00 – 10:45	Chairmen: <b>Lorena Deleanu, Pal Terek</b>
	EFFECT OF CHEMICAL INHOMOGENEITIES AND HARD PARTICLES ON ADHESION BETWEEN HARD INDENTERS AND SOFT RUBBER LAYERS <b>Iakov A. Lyashenko, Qiang Li, Valentin L. Popov</b>
	INVESTIGATION OF THE SURFACE TRIBOLOGY BEFORE AND AFTER GRAPHENE OXIDE DEPOSITION ON ULTRA-HIGH MOLECULAR WEIGHT POLYETHYLENE FILMS <b>Vladimir Pakhaliuk, Victor N. Vasilets, Aleksandr Poliakov, Yuri Velyaev</b>
	INCREASE OF WEAR AND HEAT RESISTANCE OF THE AISI 304 STEEL SURFACE LAYER BY MULTI-PASS NANOSTRUCTURING BURNISHING <b>Viktor P. Kuznetsov, Anna V. Kosareva</b>

THURSDAY 18 May 2023	Section C ( <i>Building A, Room: A-I-13</i> )
09:00 – 10:45	THE INFLUENCE OF THE PHASE ARRANGEMENT OF ATZ COMPOSITES ON THEIR WEAR RATE UNDER BALL-ON-DISC TESTS <b>Marek Grabowy, Agnieszka Wojteczko, Piotr Osada, Grzegorz Wiązania, Zbigniew Pędzich</b>
	THE EXPERIMENTAL INVESTIGATION OF FRICTION OCCURRENCE IN GRINDING PROCESS WITH ABRASIVE BELTS <b>Marija Matejic, Milos Matejic, Jovana Zivic, Jasmina Skerlic, Dragan Lazarevic, Marko Pantic</b>
	THE TRIBOLOGICAL AND RHEOLOGICAL PROPERTIES OF VEGETABLE LUBRICATING GREASE MODIFIED OF TiO <sub>2</sub> NANOPARTICLES <b>Rafal Kozdrach</b>
10:45 – 11:00	<i>Coffee break</i>
11:00 – 13:00	Chairmen: <b>Dragan Džunić, Suzana Petrović Savić</b>
	INFLUENCE OF CONTACT CONDITIONS ON THE PROCESS OF THE THIN SHEET SLIDING DURING THE FLAT DIE TEST <b>Milan T. Đorđević, Srbislav Aleksandrović, Tomislav Vujinović, Dušan Arsić, Aleksandar Todić, Dragan Čukanović, Marko Delić</b>
	INFLUENCE OF THE NOZZLE WEAR ON 3D PRINTING QUALITY <b>Strahinja Milenković, Zivana Jovanovic Pesic, Nikola Palic, Vukasin Slavkovic, Nenad Grujovic, Fatima Zivic</b>
	ANALYSIS OF THE INFLUENCE OF FRICTION ON THE DIMENSIONAL ACCURACY OF THE WORKPIECE IN THE PROCESS OF COMBINED EXTRUSION <b>Marko Delić, Vesna Mandić, Nenad Stanojlović</b>
	TRIBOLOGICAL BEHAVIOUR AND SURFACE ROUGHNESS QUALITY OF 3D PRINTED ABS MATERIAL <b>Strahinja Djurović, Dragan Lazarević, Milan Ivković, Milan Mišić, Bojan Stojčeto vić, Živče Šarkoćević</b>
INVESTIGATION OF TRIBOLOGICAL CHARACTERISTICS OF FERRITE NODULAR CAST <b>Dušan Ješić, Pavel Kovač, Borislav Savković, Dražen Sarjanović, Sandra Sovilj-Nikić</b>	

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9:00 – 10:45	Chairmen: <b>Fatima Zivic</b>
	SIMULATION OF MECHANICAL PROCESSES AT THE CONTACT REGION OF A DENTAL IMPLANT WITH BONE TISSUES UNDER SHOCK WAVE TREATMENT <b>Alexey Smolin, Galina Eremina, Irina Martyshina</b>
	DEVELOPMENT OF BIODEGRADABLE LUBRICANT OIL BASED ON COMPONENTS OF PLANT ORIGIN <b>Feodor A. Grigoriev, Nikolai K. Myshkin</b>
	STATIC AND KINETIC FRICTION OF 3D PRINTED POLYMERS AND COMPOSITES <b>Nikolay Stoimenov, Mara Kandeve, Mihail Zagorski, Peter Panev</b>
	NUMERICAL ANALYSIS OF A VISCOUS TRANSMISSION <b>Andrei I. Stoicescu, Adrian Predescu</b>
	TRIBO-CORROSION OF PIPELINE STEEL IN CHLORIDE-ACETATE ENVIRONMENTS AT THE DIFFERENT CONCENTRATIONS OF HYDROGEN SULFIDE AND CARBON DIOXIDE <b>Myroslav Khoma, Vasyl Vynar, Marian Chuchman, Chrystyna Vasyliv</b>
	EFFECT OF CROSS-SECTIONAL PROFILE OF CIRCULAR DIMPLES ON HYDRODYNAMIC LUBRICATION CHARACTERISTICS OF THRUST BEARINGS <b>Ryota Ishii, Reo Miwa, Norifumi Miyanaga, Jun Tomioka</b>
	STRESS-STATE AND SLIDING BETWEEN COLLIDING PLATES IN THE SUBDUCTION ZONE <b>Emilia Assenova, Evgenia Kozhoukharova</b>
	TRIBOLOGY OF ELECTRIC VEHICLES-A REVIEW <b>Iulian Păduraru, Iulia P. Graur, Lorena Deleanu</b>
	TRIBOLOGICAL ANALYSIS OF GEAR EP LUBRICANT MIXED WITH Al <sub>2</sub> O <sub>3</sub> /SiO <sub>2</sub> /ZrO <sub>2</sub> COMPOSITE ADDITIVE <b>Tushar Gadekar, Dinesh Kamble, Nitin Ambhore</b>
	TRIBOINFORMATIC MODELING OF WEAR IN TOTAL KNEE REPLACEMENT IMPLANTS USING MACHINE LEARNING ALGORITHMS <b>Vipin Kumar, Ravi Prakash Tewari, Ramesh Pandey, Anubhav Rawat</b>
	DEVELOPMENT AND TRIBOLOGICAL ANALYSIS OF BIO-BASED LUBRICANT USING TWO NON-EDIBLE OILS: CASTOR OIL AND NEEM OIL <b>Ayan Bindra, Dipali Yadav, Manan Anand, R. C. Singh</b>
	FOUNDRY COATINGS – REVIEW <b>Gergana Milanova</b>
TRIBOLOGICAL BEHAVIOR OF CAST ALUMINUM MATRIX COMPOSITES AFTER MULTIPLE REMELTING <b>Evgeny Prusov, Artemiy Aborkin, Vladislav Deev, Dmitriy Bokaryov, Dmitriy Babin</b>	

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10:45 – 11:00	<i>Virtual coffee break</i>
11:00 – 13:00	HEAT TREATMENT INFLUENCE ON THE CAVITATIONAL EROSION Zn-Mg BEHAVIOR USED FOR BIOMEDICAL APPLICATIONS <b>Alexandru Nicolae Luca, Iliarea Bordeasu, Cristina Maria Iordache, Gabriela Ciungu, Brandusa Ghiban, Marian Miculescu, Lavinia Madalina Micu</b>
	CAVITATIONAL EROSION BEHAVIOR OF A BIODEGRADABLE ALLOY FROM THE Zn-Mg SYSTEM FOR BIOMEDICAL APPLICATIONS <b>Cristina Maria Iordache, Alexandru Nicolae Luca, Iliarea Bordeasu, Ciungu Gabriela, Ghiban Brandusa</b>
	WEAR BEHAVIOR OF PEEK-BASED COMPOSITES DESIGNED FOR WATER LUBRICATION BEARINGS <b>Vladislav O. Alexenko, Dmitry G. Buslovich, Sergey V. Panin</b>
	DESIGN OF THE SPRINGS TIGHTENING FOR A DOUBLE CARTRIDGE MECHANICAL SEAL <b>Andrei Stanciu, Costin Ilinca, Razvan George Ripeanu</b>
	EXPERIMENTAL INVESTIGATIONS ON WEAR PHENOMENA SPECIFIC TO ROTARY DRYER FLIGHTS (BLADES) <b>Andrei Burlacu, Marius Gabriel Petrescu, Răzvan George Rîpeanu, Teodor Dumitru, Eugen Victor Laudacescu, Ibrahim Naim Ramadan, Adrian Niță</b>
	ARTIFICIAL INTELLIGENCE FUZZY LOGIC MODELING OF SURFACE ROUGHNESS IN PLASMA JET CUTTING PROCESS OF SHIPBUILDING ALUMINIUM ALLOY 5083 <b>Ivan Peko, Bogdan Nedić, Dejan Marić, Dragan Džunić, Tomislav Šolić, Mario Dragičević, Boris Crnokić, Matej Kljajo</b>
	DETERMINISTIC MODEL OF ELASTIC ROUGH CONTACT TAKING INTO ACCOUNT THE MUTUAL INFLUENCE OF ASPERITIES <b>Anastasiya Yakovenko, Irina Goryacheva</b>
	FABRICATION AND CHARACTERIZATION OF ALUMINUM-BASED POWDERS MULTI-REINFORCED WITH NANO- AND MICROPARTICLES FOR GAS-DYNAMIC SPRAYING OF TRIBOLOGICAL COATINGS <b>Artemiy Aborkin, Dmitriy Babin, Dmitriy Bokaryov</b>
	STATISTICAL MODELING AND OPTIMIZATION OF SURFACE ROUGHNESS FOR PLA AND PLA/WOOD FDM FABRICATED ITEMS <b>Nikolaos Fountas, John Kechagias, Nikolaos Vaxevanidis</b>
TAGUCHI AND REGRESSION ANALYSIS OF ABRASIVE WEAR BEHAVIOR OF CARBON EPOXY COMPOSITE <b>Sudarshan Rao K.</b>	



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11:00 – 13:00	EFFECT OF SHAFT SPEED, CRACK DEPTH AND L/D RATIO IN ROTOR BEARING SYSTEM: USING TAGUCHI METHOD AND ANOVA <b>Sudheer Kumar Veernapu, Nagaraju Cherukuri, Vangipurapu Bapi Raju</b>
	SURFACE MORPHOLOGY AND ITS STUDIES OF Al-17Si ALLOYS DURING FRICTION STIR WELDING PROCESSES <b>Shailesh Rao A., Somaiah C. A., Yuvaraj Naik</b>
	INFLUENCE OF CUTTING INSERTS IN MACHINING Al-Si ALLOY-BASED METAL MATRIX COMPOSITES <b>Sudheer Reddy J</b>
	HIGH VELOCITY OXY - FUEL COATINGS TRIBOLOGY: A CRITICAL REVIEW <b>Balachandra P. Shetty, G. J. Naveen, Shailesh S. Rao</b>
	EVALUATION OF WEAR MODEL EQUATIONS THROUGH ANALYSIS OF EXPERIMENTAL WEAR DATA OF MATERIALS FROM LITERATURE <b>Shivasharanappa V. Gubbewad, Amaresh R. Raichur</b>
	Chairmen: <b>Dragan Džunić</b>
15:00 – 17:00	RESEARCH ON TRIBOLOGICAL BEHAVIOR OF FRICTION MATERIALS WITH IDENTICAL AND DIFFERENT CRYSTAL LATTICE ON A MODEL WITH IRONING <b>Dragan Adamovic, Fatima Zivic, Tomislav Vujinovic, Nada Ratkovic, Marko Topalovic, Nina Busarac</b>
	THE INFLUENCE OF THE TEMPERATURE OF DISC BRAKES ON THE VEHICLE STOPPING EFFICIENCY <b>Nadica Stojanovic, Ivan Grujic, Ali Belhocine</b>
	INVESTIGATION OF WEAR RESISTANCE OF POLYAMIDE PA6 BASED COMPOSITE MATERIALS FOR METAL - POLYMER PLAIN BEARINGS AND GEARS <b>Myron Chernets, Yuriy Chernets, Yuriy Skvarok, Jarosław Zubrzycki</b>
	ANALYSIS OF SURFACE ROUGHNESS AND STATIC FRICTION COEFFICIENT OF Co-Cr-Mo ALLOY FOR REMOVABLE PARTIAL DETURE FRAMEWORK <b>Natasa Puskar, Milica Puskar, Mario Sokac, Zeljko Santosi, Milos Kuzmanovic, Igor Budak, Djordje Vukelic</b>
	THE MODELLING OF SURFACE ROUGHNESS AFTER THE TURNING OF INCONEL 601 BY USING ARTIFICIAL NEURAL NETWORK <b>Goran Jovicic, Aleksandar Milosevic, Mario Sokac, Zeljko Santosi, Vladimir Kocovic, Goran Simunovic, Djordje Vukelic</b>
	LUBRICANT DROPLETS CAN BOUNCE ON WETTED CYLINDERS <b>Chuchen Yue, Qingwen Dai, Jinqiu Wang, Wei Huang, Xiaolei Wang</b> ROLE OF PARTICLE SHAPE ON SLURRY EROSION WEAR OF AA6063 <b>Bhushan D. Nandre, Girish R. Desale</b>

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15:00 – 17:00	TRIBOLOGY AND INDUSTRY 4.0 <b>Bogdan Nedić, Gordana Globočki-Lakić</b>
	INFLUENCE OF THE GEOMETRY AND THE IN-DEPTH GRADING ON THE FRICTIONAL ENERGY DISSIPATION IN PARTIAL SLIP CONTACTS OF AXISYMMETRIC POWER-LAW GRADED ELASTIC SOLIDS UNDER OSCILLATING TANGENTIAL LOADS <b>Josefine Wilhayn, Markus Heß</b>
	EFFECTS OF APPLIED LOADS AND ALUMINIUM NANOPARTICLE ADDITIONS ON WEAR RESISTANCE PROPERTIES OF PARTICLE REINFORCED EPOXY NANOCOMPOSITES <b>Sefiu Adekunle Bello, Maruf Yinka Kolawole, Sunday Wilson Balogun, Johnson Olumuyiwa Agunsoye, Suleiman Bolaji Hassan</b>
	CHARACTERISTICS OF AL6061-SiC-AL2O3 SURFACE HYBRID COMPOSITES FABRICATED BY FRICTION STIR PROCESSING <b>Muna Khethier Abbass, Noor Alhuda Baheer Sharhan</b>
	CALCULATION OF LANCASTER COEFFICIENT OF ELECTRO-SPARK DEPOSITED ALUMINA/MoS <sub>2</sub> NANOCOMPOSITE COATING <b>Mohammad Roostaei, Arvin Taghizadeh Tabrizi, Hossein Aghajani</b>
	WORKING OUT THE PROCESSES OF DEPOSITION "METAL-METAL" MULTI-LAYER COATINGS (Cu-Mo, Cu-MoN, Cu-C) AND STUDYING THE TRIBOLOGICAL CHARACTERISTICS OF FRICTION PAIRS <b>Olexiy Sagalovych, Viktor Popov, Vladislav Sagalovych, Stanislav Dudnik, Oleksandr Oleynik</b>
	N-METHYL-2-(1-(5-METHYLTHIOPHEN-2-YL) ETHYLIDENE) HYDRAZINECARBOTHIOAMIDE AS CORROSION INHIBITOR FOR MILD STEEL IN HCL SOLUTION: WEIGHT LOSS AND DFT INVESTIGATIONS <b>Makarim Abdulkareem, Zuhail Gbashi, Basheer Abdulhussein, Mahdi Hanoon, Ahmed Al-Amiery, Waleed Al-Azzawi</b>

Poster Section ( <i>Building A-I</i> )	
	DESIGN, FABRICATION, AND APPLICATION STUDY OF DROPLET TUBE BASED TRIBOELECTRIC NANOGENERATORS <b>Yana Xiao</b>
	SURFACE CHARACTERISATION USING IMAGE PROCESSING <b>Suzana Petrovic Savic, Vladimir Kocovic, Dragan Dzunic, Marko Pantic, Sonja Kostic, Sasa Milojevic, Tijana Prodanovic</b>
	CONTROL OF FRICTION BY ULTRASONIC OSCILLATIONS <b>Valentin L. Popov, Jasminka Starčević</b>

## Poster Section (*Building A-I*)

TRIBOELECTRIC NANOGENERATORS BASED ON 2D GRAPHITIC CARBON NITRIDE DOPED COMPOSITES

**Yana Xiao**

INFLUENCE OF COUNTER BODY MATERIAL ON MATERIAL TRANSFER DURING BALL ON PLATE DRY SLIDING

**Dragan Džunić, Suzana Petrović Savić, Vladimir Kočović, Sonja Kostić, Aleksandar Đorđević, Aleksandra Kokić Arsić, Slobodan Mitrović**

SIMULATION OF THE MECHANICAL BEHAVIOR OF THE DEGRADATION L4-L5 LUMBAR SPINE

**Galina Eremina, Alexey Smolin**

OPTIMIZATION OF THE MICRO-CUTTING PROCESS IN ORDER TO REDUCE THE SURFACE ROUGHNESS

**Vladimir Kočović, Sonja Kostić, Dragan Džunić, Suzana Petrović Savić, Ivan Bijelić, Dragomir Miljanić, Djordje Vukelić**

ABRASIVE WEAR PERFORMANCE OF COIR FIBER REINFORCED POLYMER COMPOSITE

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## Conference Dinner

### Restaurant Oranica



**Address: Borivoja Glisica 25, Kragujevac**

## Conference trip



The **Oplenac Mausoleum**, located in Topola, Serbia, is a remarkable testament to the country's rich cultural heritage and history. The mausoleum was built as a tribute to the Karadjordjevic family, who played an important role in Serbia's history. The Church of Saint George that is part of the complex was built by King Peter I of Serbia in the early 20th century to honor his ancestors. The church was designed by architect Nikola Nestorovic and is a stunning

example of Byzantine-style architecture, with intricate mosaics covering its walls and ceilings. The construction of the mausoleum began in 1910, following the death of King Peter I. The mausoleum was built on a hill overlooking the church and the town of Topola. It was designed by the Russian architect Nikolai Krasnov. The mausoleum's striking white marble exterior was imported from Italy, and the interior is decorated with more than 40 million tiny mosaic pieces. The mosaics depict important events from Serbia's history, including the Battle of Kosovo and the First Serbian Uprising, as well as scenes from the lives of the Karadjordjevic family. The mausoleum was completed in 1930 and contains the remains of several members of the Karadjordjevic family, including King Peter I and his wife, Queen Ljubica. It has become a symbol of national identity and is an important pilgrimage site for Serbs around the world.



The **House of King Peter I** was built in the early 20th century as a summer residence for King Peter I of Serbia and his family. The house features a beautiful garden, with fruit trees and flowers, which was a favorite spot for the king and his family to relax and enjoy the fresh air. The interior of the house is decorated with period furniture, paintings, and other artifacts, offering visitors a glimpse into the life of Serbian royalty in the early 20th century. During World War I, the house served as the headquarters for the Serbian army, and it was badly damaged during the

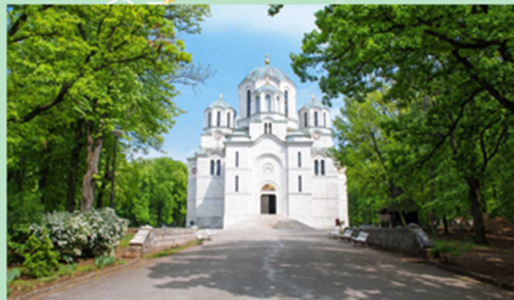
war. However, the house was eventually restored and is now a museum that showcases the rich history and culture of Serbia.



The **King's Winery**, built in 1931 on the French model, is a well-preserved example of a modern wine-cellar. It has a ground floor and two underground floors, with a constant temperature of 8°C, and 99 oak barrels. The museum exhibition displays some of the oldest bottles and equipment used in wine bottling. The winery also has

archive wines, including Oplenka, Žilavka, White Burgundy, Prokupac, Hamburg, and Plemenka, with uniquely shaped bottles and the Royal coat of arms. After neglect in the post-WWII period, the Oplenac vineyards were renovated in 2000, with the first harvest in 2006. Today, wines from the King's vineyards are again served worldwide.

# St. George's Church



# King Peter's House



# King's Winery



# Restaurant Vožd



🚗 40-50 min  
38.7 km

# Faculty of Engineering University of Kragujevac

