

MATEDAS 2023
List of oral presentations and posters

No.	Form of presentation	Name, surname	Institution	Title of abstract
1102	POSTER	Paweł Żurawski	¹ Doctoral School of the Rzeszów University of Technology, Poland	Welding process of pistons for diesel engines for military and special vehicles
		Andrzej Trytek	² Rzeszów University of Technology, Faculty of Mechanics and Technology, Stalowa Wola, Poland	
1104	POSTER	Józef Brzęczek	Rzeszów University of Technology, Faculty of Mechanics and Technology, Department of Component Manufacturing and Production Organization, Stalowa Wola, Poland	Estimation of aircraft cable control systems durability based on actual loads
1105	ORAL PRESENTATION	Marek Szewczyk ²	¹ Department of Component Manufacturing and Production Organization, Faculty of Mechanics and Technology, Rzeszow University of Technology, Stalowa Wola, Poland	Influence of selected cutting parameters on surface integrity in the turning process of steel ¹⁻⁴⁴⁰⁴
		Krzysztof Szwajka ²	² Department of Integrated Design and Tribology Systems, Faculty of Mechanics and Technology, Rzeszow University of Technology, Stalowa Wola, Poland	
		Joanna Zielińska-Szwajka ¹		
1106	POSTER	Krzysztof Szwajka ¹	¹ Department of Integrated Design and Tribology Systems, Faculty of Mechanics and Technology, Rzeszow University of Technology, Stalowa Wola, Poland	Influence of selected friction welding parameters on the microstructure and properties of the dissimilar joint 32CrMo4-Inconel 713C for aerospace applications
		Joanna Zielińska-Szwajka ²	² Department of Component Manufacturing and Production Organization, Faculty of Mechanics and Technology, Rzeszow University of Technology, Stalowa Wola, Poland	
		Marek Szewczyk ¹		
1107	POSTER	Marek Szewczyk ¹	¹ Department of Integrated Design and Tribology Systems, Faculty of Mechanics and Technology, Rzeszow University of Technology, Stalowa Wola, Poland	The influence of alphining time on the microstructure and quality of bimetallic joints
		Krzysztof Szwajka ¹	² Department of Component Manufacturing and Production Organization, Faculty of Mechanics and Technology, Rzeszow University of Technology, Stalowa Wola, Poland	
		Joanna Zielińska-Szwajka ²		

1108	ORAL PRESENTATION	Piotr Bieniek ¹	¹ Doctoral School of the Rzeszów University of Technology Ignacy Łukasiewicz, Rzeszów, Poland	Characteristics of the measurement of ballistic parameters during firing from the 155 mm ballistic station of the KRAB self-propelled howitzer
		Mirosław Tupaj ²	² Rzeszów University of Technology, Faculty of Mechanics and Technology, Stalowa Wola, Poland	
1109	ORAL PRESENTATION	Tomasz Galek	Rzeszów University of Technology, Faculty of Mechanics and Technology, Stalowa Wola. Poland	Automatic image processing for morphology and grain size distribution analysis of metallic powders used in laser metal deposition techniques
		Mirosław Tupaj		
1110	ORAL PRESENTATION	Marcin Marciniak	Rzeszów University of Technology, Faculty of Mechanics and Technology, Stalowa Wola, Poland	The use of FDM technology in defense: Materials, potential, and the impact of 3D prints on modern armed conflicts
1111	POSTER	Jan Czyżewski	Rzeszów University of Technology, Faculty of Mechanics and Technology, Stalowa Wola, Poland	Modification of the profile of the camshaft cams with the use of a coating with increased resistance to abrasive wear
		Karol Łysiak		
		Tomasz Galek		
1112	POSTER	Karol Łysiak ¹	¹ Rzeszów University of Technology, Faculty of Mechanics and Technology, Stalowa Wola, Poland	Calorimetric heat measurements in the laser cladding process of Stellite6 powder
		Mirosław Tupaj ¹	² WEA Techlab, Dąbrowa Górnicza, Poland	
		Andrzej Trytek ¹		
		Tomasz Galek ¹		
		Wiktorija Zbyrad-Kołodziej ¹		
Ernest Szajna ²				
2401	ORAL PRESENTATION	Lipový Břetislav ^{1,2}	¹ Fakultní nemocnice Brno a Lékařská fakulta Masarykovy univerzity, Brno, Klinika popálenin a plastické chirurgie	Burn wound infections in the present and future preventive and therapeutic concepts
		Raška F. ¹	² CEITEC VUT – Středoevropský technologický institut, Vysoké učení technické, Brno	
		Holoubek J. ¹	³ Mikrobiologický ústav, Fakultní nemocnice u sv. Anny a Lékařská fakulta Masarykovy univerzity, Brno	
		Váňa V. ¹	⁴ Oddělení infekčních chorob a preventivní medicíny, Výzkumný ústav veterinárního lékařství, Brno	
		Vacek L. ³		
		Kobzová Š. ⁴		
		Pavelka A. ⁴		
		Černá E. ²		
		Janda L. ⁴		
		Růžička F. ³		
Vojtová L. ²				

2402	ORAL PRESENTATION	Petr Louda	Technical University of Liberec, Faculty of Mechanical Engineering, Department of Material Science	Military and civilian applications of geopolymers
		Vojtech Ruzek		
		Vladimir Nosek		
2502	ORAL PRESENTATION	Przemysław Simiński	Military Institute of Armoured and Automotive Technology	Experimental and numerical validation of an armor plate test stand
		Krzysztof Kosciuzenko		
		Marek Nowakowski		
3001	POSTER	Róbert Cíger ¹	¹ Faculty of Special Technology, Alexander Dubcek University of Trenčín, 911 06 Trenčín, Slovakia.	Comparison of tribological properties of Inconel 635 - steel 16Mo3 bimetallic pipe materials after critical bending
		Michal Krbaťa ¹	² KONŠTRUKTA - Defence, a.s.. Lieskovec 575/25 018 41 Dubnica nad Váhom, Slovakia	
		Marta Kianicová ¹		
		Milan Jus ¹		
		Marcel Kohutiar ¹		
		Maroš Eckert ¹		
		Michal Kuba ¹		
Ján Palkech ²				
3002	POSTER	Michal Krbaťa ¹	¹ Faculty of Special Technology, Alexander Dubcek University of Trenčín, Ku Kyselke 469, 911 06 Trenčín, Slovakia	Measuring the Thickness of Al & Cr-Al Coatings on Inconel 713LC Superalloy: A Study Using Direct and Indirect Method
		Marta Kianicová ¹	² Konštrukta Defence, Lieskovec 575/25, 018 41 Dubnica nad Váhom	
		Peter Fabo ¹		
		Jana Escherová ¹		
		Marcel Kohutiar ¹		
		Ján Palkech ²		
3003	ORAL PRESENTATION	Juraj Majerský	Faculty of special technology, Alexander Dubcek University of Trencin. Ku kyselke 469, 911 06 Trencin. Slovakia	Machining of M390 Microclean® and M398 Mircoclean® PM Steels – the comparison of cutting forces and surface roughness
		Jozef Majerík		
		Igor Barényi		
		Henrieta Chochlíková		
		Jana Escherová		
		Mária Kubasáková		

3007	ORAL PRESENTATION	Mária Kubasáková ¹	¹ Faculty of Special Technology, Alexander Dubcek University of Trencin, Ku kyselke 469, 911 06 Trenčín-Záblatie. Slovakia	Research of material and technological properties of ArmoX structured perforated armor sheets for ballistic protection – Smartshield
		Jozef Majerík ¹	² Faculty of Military Technology, University of defence in Brno. Kounicova 65, 662 10 Brno, Czech Republic	
		Henrieta Chochlíková ¹		
		Juraj Majerský ¹		
		Zdeněk Joska ²		
4003	ORAL PRESENTATION	Jindřich Viliš ¹	¹ Faculty of Military Technology, University of Defence in Brno. Kounicova 65, 612 00 Brno. Czech Republic	Experimental investigation of the armour (ArmoX 500T-Aramid-UHMWPE)
		Zdeněk Pokorný ¹	² Faculty of Mechanical Engineering, Brno University of Technology, Technická 2, 616 69 Brno, Czech Republic	
		Jan Zouhar ²	³ Faculty of Mechanical Engineering, Research Center of Manufacturing Technology, Czech Technical University in Prague, Horská 3, 128 00 Prague 2, Czech Republic	
		Roman Vitek ¹		
		Michal Stejskal ³		
4005	POSTER	Jiří Procházka ¹	¹ Faculty of Military Technology, University of Defence in Brno. Kounicova 65, 612 00 Brno. Czech Republic	Effect of thermal annealing on mechanical properties of thermoplastics printed by FFF/FDM technology
		Jakub Pernica ²	² Mendel University in Brno, Faculty of AgriSciences, Department of Technology and Automobile Transport	
		David Dobrocký ¹		
		Alexander Kravcov ¹		
		Petr Dostál ²		
4006	POSTER	Zdeněk Joska ¹	¹ Faculty of Military Technology, University of Defence in Brno. Brno. Czech Republic	Evaluation of dentin wear after flossing
		Zdeněk Pokorný ¹	² Department of Pathophysiology, Faculty of Medicine, Masaryk University. Brno. Czech Republic	
		David Dobrocký ¹		
		Michaela Krchova ²		
4007	POSTER	Bui Thanh Phan	Faculty of Military Technology, University of Defence in Brno. Kounicova 65, 612 00 Brno. Czech Republic	Modeling of diffusion in vacuum drying of propellants
		Lenka Dobšáková		
		Vladimír Horák		

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4007	ORAL PRESENTATION	The Duy Nguyen	Faculty of Military Technology, University of Defence in Brno. Kounicova 65, 612 00 Brno. Czech Republic	Cooling Ability of Smooth and Dimpled Surfaces
		Lenka Dobšáková		
5001	ORAL PRESENTATION	Lukáš Řehořek ¹	¹ Faculty of Mechanical Engineering, Brno University of Technology, Dept. of Metal Materials, Brno, Czech Republic	The Potential of Cold Gas Dynamic Spray Technology for Armed Forces
		Jan Vetiška ²	² Faculty of Mechanical Engineering, Brno University of Technology, Dept. of Robotics and Robots, Brno, Czech Republic	
		Jindřich Viliš ³	³ University of Defence, Department of Mechanical Engineering, Brno, Czech Republic	
		Marek Doubrava ¹		
5002	ORAL PRESENTATION	Stepan Kolomy	Brno University of Technology, Faculty of Mechanical Engineering, Brno, Czech Republic	Study of mechanical properties and structure of 3D printed maraging steel
		Josef Sedlak		
		Jan Zouhar		
		Martin Slany		
5002	ORAL PRESENTATION	Daniel Chrast	Institute of Manufacturing Technology, FME, Czech Brno University of Technology, Brno, Czech Republic	The Analysis of Surfacing Welds of Inconel 625
		Martin Slany		
		Josef Sedlak		
		Jan Zouhar		
		Stepan Kolomy		
		Oskar Zemcik		
5004	POSTER	Martin Juliš ¹	¹ Central European Institute of Technology, Brno University of Technology, Brno, Czech Republic	Production and Application of Precision Magnesium Alloys Castings made by the Lost Wax Process and their Surface Treatments Possibilities
		David Kusmič ¹	² Alucast s.r.o., Tupesy, Czech Republic	
		Lenka Klakurková ¹		
		Pavel Gejdoš ¹		
		Jarmil Cileček ²		
5006	POSTER	Oskar Zemčík	Institute of Manufacturing Technology, FME, Czech Brno University of Technology, Brno, Czech Republic	Machining of UMC050 Cobalt Superalloy
		Martin Slany		
		Josef Sedlák		
		Jan Zouhar		

5007	ORAL PRESENTATION	Marek Doubrava	Faculty of Mechanical Engineering, Brno University of Technology, Technická 2896/2, 616 69, Brno, Czech Republic	Restoration of Military and Aerospace Equipment Manufactured from Nickel Superalloys using Cold Spray Technology
		Lukáš Řehořek		
6001	ORAL PRESENTATION	Petra Bořilová Linhartová^{1,2,3}	¹ RECETOX, Faculty of Science, Masaryk University, Brno	Microbiome Labs – testing of probiotic- containing nanomaterials and its use in preventive medicine
		Filip Růžička ⁴	² Clinic of Stomatology, St Anne's University Hospital, Faculty of Medicine, Masaryk University, Brno	
		František Janda ⁵	³ Clinic of Oral and Maxillofacial Surgery, University Hospital Brno, Faculty of Medicine, Masaryk University, Brno	
		Pavla Holochová ¹	⁴ Institute of Microbiology, St. Anne's University Hospital, Faculty of Medicine, Masaryk University, Brno	
		Maximilián Rada ¹	⁵ Wikinomist s.r.o., Praha	
		Zdeněk Pokorný ⁶	⁶ Department of Mechanical Engineering, Faculty of Military Technology, University of Defence, Brno	
		Eva Kuželová Košťáková ⁷	⁷ Institute of Chemistry, Faculty of Science, Humanities and Education, Technical University of Liberec, Liberec	
		Eva Budinská ¹ Petra Růžičková ¹ Jana Klánová ¹		
6002	ORAL PRESENTATION	Michaela Krchova	Department of Pathophysiology, Faculty of Medicine, Masaryk University. Brno. Czech Republic	Evaluation of cellular behavior depending on different micro/nanostructure of 3D printed titanium alloy surface
		Lucie Valkova		
		Monika Pavkova Goldbergova		
6003	POSTER	Jana Šístková¹	¹Department of Pathological Physiology, Faculty of Medicine, Masaryk University, Brno, Czech Republic	Roughness parameters of titanium biomaterial with nanostructured surface in relation to antibacterial activity
		Tatiana Fialová ²	² Department of Chemistry and Biochemistry, Mendel University in Brno, Brno, Czech Republic	
		Emil Svoboda ³	³ Department of Mechanical Engineering, Faculty of Military Technology, University of Defence, Brno, Czech Republic	
		Monika Pávková Goldbergová ¹		

6004	ORAL PRESENTATION	Polina Navratilova ¹	¹ Department of Pathophysiology, Faculty of Medicine, Masaryk University. Brno. Czech Republic	Characterisation of Macrophage Response to Nickel Nanoparticles and Ions Released from Biomaterials
		Jan Emmer ²	² 1st Department of Orthopaedics, St. Anne's University Hospital, Masaryk University. Brno, Czech Republic	
		Tomas Loja ³	³ Centre for Molecular Medicine, Central European Institute of Technology/Masaryk University. Brno. Czech Republic	
		Monika Pavkova Goldbergova ¹		
6006	ORAL PRESENTATION	Veronika Vesela	Department of Pathophysiology, Faculty of Medicine, Masaryk University. Brno. Czech Republic	Effect of Ni and TiO ₂ Nanoparticles on Viability, Adhesion and Morphology of Human Umbilical Vein Endothelial Cells
		Jana Veverkova		
		Polina Navratilova		
		Monika Pavkova Goldbergova		
8001	ORAL PRESENTATION	Michal Stejskal	Institute of Production Machinery and Equipment, Czech Technical University in Prague, Faculty of Mechanical Engineering	Increasing the efficiency of machining modern materials and freeform parts
		Matej Sulitka		
		Jan Smolik		
		Pavel Zeman		
9001	ORAL PRESENTATION	Robert Kosturek	Faculty of Mechanical Engineering, Military University of Technology, Warsaw, Poland	Selected problems in friction stir welding of titanium and aluminum armor grade alloys
		Janusz Torzewski		
		Marcin Wachowski		
		Krzysztof Grzelak		
		Lucjan Śnieżek		
9002	ORAL PRESENTATION	Marcin Wachowski	Faculty of Mechanical Engineering, Military University of Technology, Warsaw, Poland	The effect of stress relief annealing on the microstructure of Titanium Grade 1 - S355J2 bimetallic clad-plate obtained via explosive welding
		Robert Kosturek		
		Lucjan Śnieżek		

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9003	ORAL PRESENTATION	Volodymyr Hutsaylyuk ¹	¹ Faculty of Mechanical Engineering, Military University of Technology, Warszawa, Polska	Effect of Laser Shock Wave Treatment on Mechanical Properties of Titanium Grade 1
		Marcin Wachowski ¹	² Faculty of Computer Information Systems and Software Engineering, Ternopil Ivan Puluj State Technical University, Ternopil, Ukraine	
		Bogdan Kovalyuk ²		
		Vitalii Mocharskyi ²		
		Oksana Sitkar ²		