

Program konferencie Novus Scientia 2023

26.01.2023

Strojnícka fakulta TUKE



Otvorenie konferencie: 9:00

Patronát konferencie

Dr.h.c. mult. prof. Ing. Jozef Živčák, PhD., MPH, Technická univerzita v Košiciach, Slovensko

Garant konferencie

prof. Ing. Ján Slota, PhD., Technická univerzita v Košiciach, Slovensko

Vedecký výbor konferencie

prof. Ing. Jozef Bocko, CSc., Technická univerzita v Košiciach, Slovensko

prof. Ing. Radovan Hudák, PhD., Technická univerzita v Košiciach, Slovensko

prof. Ing. Michal Kelemen, PhD., Technická univerzita v Košiciach, Slovensko

prof. Ing. Ervin Lumnitzer, PhD., Technická univerzita v Košiciach, Slovensko

prof. Ing. Emil Spišák, CSc., Technická univerzita v Košiciach, Slovensko

prof. Ing. Tomáš Brestovič, PhD., Technická univerzita v Košiciach, Slovensko

doc. Ing. Ján Král, PhD., Technická univerzita v Košiciach, Slovensko

doc. Ing. Peter Frankovský, PhD., Technická univerzita v Košiciach, Slovensko

prof. Ing. Michal Hatala, PhD., Technická univerzita v Košiciach, Slovensko

prof. Ing. Eva Tillová, PhD., Žilinská univerzita v Žiline, Slovensko

prof. Ing. Stanislav Ďuriš, PhD., Slovenská technická univerzita v Bratislave, Slovensko

prof. Ing. Peter Šugár, CSc., Slovenská technická univerzita v Bratislave, Slovensko

prof. Ing. Ivan Křupka, Ph.D., Vysoké učení technické Brno, Česká republika

doc. Ing. Miroslav Mahdal, Ph.D., VŠB Technická univerzita Ostrava, Česká republika

prof. Ing. Tomáš Jirout, Ph.D., ČVUT Praha, Česká republika

doc. Ing. Petr Lepšík, Ph.D., Technická univerzita v Liberci, Česká republika

doc. Ing. Václav Vaněk, Ph.D., Západočeská univerzita v Plzni, Česká republika

dr hab. inż. Andrzej Burghardt, prof. PRz, Politechnika Rzeszowska, Poľsko

Dr inż. Tomasz Jachowicz, Politechnika Lubelska, Poľsko

Sekcia A
9:15 – 16:45

Komisia:

doc. Ing. Michal Puškár, PhD.
doc. Ing. Miriam Pekarčíková, PhD.
doc. Ing. Miroslav Pástor, PhD.

čas	Doktorand	Názov príspevku	Autorský kolektív
9:15 – 9:30	Ing. Bibiána Ondrejová	3D PRINTED CUSTOMIZED CAST FOR A CHILD WITH UPPER EXTREMITY FRACTURES: A CASE STUDY	Branko Štefanovič, Monika Michalíková, Lucia Bednarčíková, Jozef Živčák
9:30 – 9:45	Ing. Nikita Veligotskyi	INFLUENCE OF SELECTED PROCESS PARAMETERS ON JOINT FORMATION BY THERMAL DRILLING TECHNOLOGY	Erik Janoško, Anna Guzanová
9:45 – 10:00	Ing. Pavol Tarbajovský	ADVANCED EXHAUST SYSTEM FOR VEHICLES EMISSION FOOTPRINT REDUCTION	Matúš Lavčák, Michal Puškár
10:00 – 10:15	Ing. Michal Šašala	ANALYSIS OF AVAILABLE TORQUE ON THE OUTPUT SHAFT FOR UNIVERSAL ROTARY MODULE PROTOTYPE	Jozef Svetlík, Tomáš Stejskal, Štefan Onočko
10:15 – 10:30	Ing. Peter Palička	HOMOGENIZATION OF COMPOSITE MATERIAL REINFORCED WITH DISCONTINUOUS FIBERS	Róbert Huňady, Sára Janigová
10:30 – 10:45	Ing. Juliy Martyn Kulya	THE STRAIN DISTRIBUTION AT THE LIMIT DOME HEIGHT TEST OF DUAL PHASE STEEL AND CORRELATION OF EXPERIMENT-SIMULATION RESULTS	Miroslav Tomáš
10:45 – 11:00	COFFEE BREAK		
11:00 – 11:15	Ing. Ján Hašul'	INCREASING THE TECHNOLOGICAL LIFE OF MOLDS FOR HIGH-PRESSURE ALUMINUM CASTING BY APPLYING PVD COATINGS	Janette Brezinová
11:15 – 11:30	Ing. Erik Janoško	CORROSION RESISTANCE OF STEEL HX340LAD+Z AFTER DEFORMATION	Anna Guzanová, Nikita Veligotski
11:30 – 11:45	Ing. Pavol Štefčák	DESIGN AND SETUP OF A ROBOTIC WORKSTATION FOR ADDITIVE MANUFACTURING	Ivan Gajdoš, Ján Slota
11:45 – 12:00	Ing. Anna Yehorova	ASSESSMENT OF THE ACOUSTIC PERFORMANCE OF DIFFERENT CATEGORIES OF DRONES	Ervin Lumnitzer, Elena Jurgovská
12:00 – 13:00	OBEDNÁ PRESTÁVKA		

13:00 – 13:15	Ing. Tomáš Balint, MPH	OVERVIEW OF MATERIALS FOR THE PRODUCTION OF BIOMEDICAL FILAMENTS	Jozef Živčák, Samuel Lancoš, Miroslav Kohan, Tomáš Jaroš
13:15 – 13:30	Ing. Tomáš Breškovič	OVERVIEW OF TRENDS IN TISSUE ENGINEERING	Gabriela Dancáková, Radovan Hudák, Norbert Ferenčík
13:30 – 13:45	Ing. Ivana Koláriková	VERIFICATION OF THE PROPERTIES OF LINEAR POSITION SENSORS	Tatiana Kelemenová, Barbora Hudáková
13:45 – 14:00	Ing. Maksym Grytsiv	MAPPING OF THE SURROUNDING ENVIRONMENT OF THE MOBILE ROBOT BASED ON THE LIDAR LOCALIZATION SYSTEM	Marek Sukop, Dušan Mlinarček, Dávid Kovaľuk
14:00 – 14:15	Ing. Štefan Ondočko	USE OF MATLAB - SIMULINK FOR CALCULATING THE KINEMATIC VARIABLES OF THE MECHANISM	Jozef Svetlík, Tomáš Stejskal, Michal Šašala
14:15 – 14:30	Ing. Jozef Brindza	CYLINDER HEAD MODIFICATIONS OF INTERNAL COMBUSTION ENGINE	Michal Demko, Filip Dominik, Marek Vrabeľ, Peter Ižol
14:30 – 14:45	Ing. Branko Štefanovič	INDIVIDUAL ARM AND FOREARM ORTHOSIS CAD DESIGN	Lucia Bednarčíková, Jozef Živčák
14:45 – 15:00	COFFEE BREAK		
15:00 – 15:15	Mgr. Ing. Miroslava Badidová	ANALYSIS OF EMISSIONS EMITTED BY LASER TECHNOLOGY	Lýdia Sobotová
15:15 – 15:30	Ing. Jana Demeterová	3D BIOPRINTING USING STEM CELLS IN REGENERATIVE MEDICINE	Marianna Trebuňová, Darina Bačenková, Jozef Živčák
15:30 – 15:45	Ing. Alžbeta Nováková	ANALYSIS OF THE INFLUENCE OF THE POROSITY OF RECYCLED RUBBER CRUMB ON ITS ACOUSTIC PROPERTIES	Kristián Pástor, Miroslav Badida
15:45 – 16:00	Ing. Matúš Kačír	DUAL-MASS FLYWHEEL FOR HYBRID PROPULSION	Robert Grega
16:00 – 16:15	Ing. Samuel Vilkovský	ANALYSIS OF DEEP DRAWING SIMULATION USING SIMUFACT SOFTWARE	Janka Majerníková
16:15 – 16:30	Ing. Patrik Varga	EVALUATION OF ACCURACY AND POROSITY OF FDM 3D PRINTED PEEK IMPLANTS	Radovan Hudák, Teodor Tóth, Marek Schnitzer
16:30 – 16:45	Ing. Petra Kolembusová	REVIEW OF BIOREACTOR SYSTEMS IN TISSUE ENGINEERING	Radovan Hudák, Norbert Ferenčík
18:00	SPOLOČENSKÝ RAUT		

Sekcia B
9:15 - 16:45

Komisia:

prof. Ing. Michal Kelemen, PhD.,
doc. Ing. Ľuboš Kaščák, PhD.
doc. Ing. Teodor Tóth, PhD.

čas	Doktorand	Názov príspevku	Autorský kolektív
9:15 – 9:30	Ing. Vladimír Rohaľ	THE QUALITY EVALUATION OF THE CUTTING SURFACE BY MICROSCOPIC ANALYSIS	Emil Spišák
9:30 – 9:45	Mgr. Ľuboš Chromý	PROPOSAL OF A METHODOLOGY FOR EVALUATING THE PLACEMENT OF DENTAL IMPLANTS USING DENTAL SURGICAL GUIDES	Viktória Rajtúková, Radovan Hudák
9:45 – 10:00	Ing. Denis Cmorej	NUMERICAL SIMULATION OF CLINCH-RIVETING OF HX420LAD STEEL SHEETS	Ľuboš Kaščák
10:00 – 10:15	Ing. Lucia Žuľová	VERIFICATION OF THE CAUSAL DEPENDENCE OF NOISE AND VIBRATION ON A MECHANICAL DRIVE WITH A PISTON COMPRESSOR	Robert Grega, Marián Siman
10:15 – 10:30	Ing. Filip Duda	STRUCTURAL DESIGN AND STRENGTH ANALYSIS OF NON-STANDARDIZED METAL HYDRIDE VESSEL FOR MOBILE APPLICATIONS	Natália Jasminská
10:30 – 10:45	Ing. Elena Jurgovská	CHANGES IN THE INTENSITY OF ELECTROMAGNETIC FIELDS AT BASE STATIONS OF MOBILE OPERATORS	Ervin Lumnitzer, Anna Yehorova
10:45 – 11:00	COFFEE BREAK		
11:00 – 11:15	Ing. Denisa Porubčanová	ERGONOMIC ASSESSMENT OF PHYSICAL LOAD IN THE MECHANICAL ENGINEERING INDUSTRY	Kristína Lengyelová, Miroslav Čička, Ferdinand Kóča, Michaela Balážiková
11:15 – 11:30	Ing. Samuel Lancoš	TECHNOLOGICAL PROCESS OF FILAMENT PRODUCTION FROM PPSU MATERIAL AND THE EFFECT ON ITS BIOCOMPATIBILITY	Miroslav Kohan, Gabriela Dancáková, Tomáš Balint, Radovan Hudák
11:30 – 11:45	MDDr. Svetlana Rusnáková	DETECTION OF NICKEL AND CHROMIUM RELEASE IN THE ORAL CAVITY IN PATIENTS WITH METAL-CERAMIC DENTAL PROSTHESES	Jozef Živčák
11:45 – 12:00	Ing. Róbert Moro	APPLICATION OF A CONVERSION LAYER BY PHOSPHATING IN THE PRETREATMENT OF STEELS FOR BONDING	Dagmar Draganovská
12:00 – 13:00	OBEDNÁ PRESTÁVKA		

13:00 – 13:15	Ing. Wanda Mamrilla	EFFECT OF MN ADDITION ON THE MECHANICAL PROPERTIES OF ZINC ALLOYS	Zuzana Molčanová, Beáta Ballóková, Dóra Zalka, Karel SaksI
13:15 – 13:30	Ing. František Kupec	USE OF CFD METHOD FOR RESEARCH OF AERODYNAMIC ELEMENTS OF PASSENGER CAR	Michal Fabian
13:30 – 13:45	Ing. Gabriela Dancáková	DEVELOPMENT AND PRODUCTION OF IN-EAR HEARING AIDS (ITE) USING ADDITIVE MANUFACTURING	Viktória Rajtúková, Dominika Belvončíková, Tomáš Breškovič, Jozef Živčák, Radovan Hudák
13:45 – 14:00	Ing. Kristián Pástor	ANALYSIS OF THE SOUND OF SELECTED AUTOMOBILE POWERTRAINS USING PSYCHOACOUSTIC METHODS	Miroslav Badida, Alžbeta Nováková, Anna Badidová
14:00 – 14:15	Ing. Peter Ján Sinčák	CONTINUUM ROBOT CONTROL BASED ON REINFORCEMENT LEARNING	Ivan Virgala, Martin Varga
14:15 – 14:30	Ing. Matúš Virostko	INTRODUCTION TO GENERATIVE DESIGN	Martin Mantič, Samuel Sivák
14:30 – 14:45	Ing. Martin Varga	NEW TRENDS IN INDUSTRIAL ROBOT RESEARCH AND APPLICATION: REDUNDANT ROBOTS	Ivan Virgala, Michal Kelemen
14:45 – 15:00	COFFEE BREAK		
15:00 – 15:15	Ing. Tomáš Merva	A SURVEY OF INTEGRATED TASK AND MOTION PLANNING	Ivan Virgala
15:15 – 15:30	Ing. Matúš Lavčák	BIOFUEL MIXTURE APPLICATION AIMING FOR MOTORCYCLES EMISSION FOOTPRINT REDUCTION	Pavol Tarbajovský, Michal Puškár
15:30 – 15:45	Ing. Henrich Sailer	EVALUATION OF THE QUALITY OF RENOVATION LAYERS IN TRIBOLOGICAL CONDITIONS	Janette Brezinová
15:45 – 16:00	Ing. Jaroslav Romančík	DEVELOPMENT AND TESTING OF COLLABORATIVE WORKPLACE WITH 2D CAMERA SYSTEM	Marek Vagaš
16:00 – 16:15	Ing. Ivan Mihalík	DESIGN OF A HYDROGEN DISTRIBUTION SYSTEM IMPLEMENTED IN A HYDROGEN BUS	Tomáš Brestovič
16:15 – 16:30	Ing. Samuel Sivák	INTRODUCTION OF GENERATIVE DESIGN FOR SPUR GEAR WHEEL BODIES	Silvia Maláková, Matúš Virostko
16:30 – 16:45	Ing. Dominik Novotný	TYPES OF PHOTOCATALYTIC DEVICES	Ján Kráľ
18:00	SPOLOČENSKÝ RAUT		