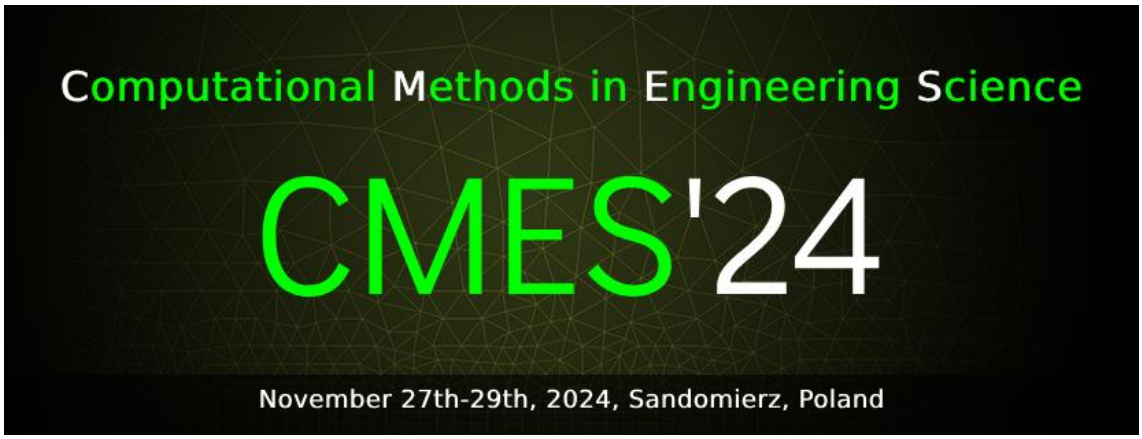

CMES 2024 CONFERENCE PROGRAM

Wednesday, 27th November 2024

9.00*	Tour bus departure from Lublin University of Technology to Mały Rzym Hotel in Sandomierz
12.30 – 13.00	OPENING OF CONFERENCE AND WELCOME SPEECHES
13.00–13.30	PLENARY LECTURES I
13.30 – 14.00	PLENARY LECTURES II
14.00 – 15.00	Lunch break
15.00 – 15.30	PLENARY LECTURES III
15.30 – 16.45	SESSION I "COMPUTATIONAL FLUID DYNAMICS (CFD)"
16.45 – 17.00	Coffee break
17.00 – 18.00	SESSION II "ARTIFICIAL AND COMPUTATIONAL INTELLIGENCE"
17.00 – 19.00	Workshop by Carl Zeiss Sp. z o.o.
18.00 – 18.10	Group photo
18.10 – 19.00	SESSION POSTER I
20.00	Gala Dinner

* All times are in the CET time zone (UTC+1)

Thursday, 28th November 2024

8.30	Registration
9.00 – 9.30 *	PLENARY LECTURES IV
9.30 – 10.00	PLENARY LECTURES V
10.00 – 10.30	Coffee break
10.30 – 11.30	SESSION III "APPLICATION OF COMPUTER PROGRAMS IN TECHNOLOGY"
11.30 – 11.45	Coffee break
11.45 – 13.00	SESSION IV "ADVANCED METHODS IN STRUCTURAL ANALYSIS AND MATERIAL ENGINEERING"
13.00 – 14.00	Lunch
14.00 – 16.00	SESSION V "COMPUTER SIMULATIONS OF PROCESSES AND PHENOMENA"
16.00 – 16.30	Coffee break
16.30 – 17.30	SESSION VI "PRODUCTION ENGINEERING, MANAGEMENT AND QUALITY CONTROL"
17.45 – 19.00	POSTER SESSION II
19.30	Dinner

Friday, 29th November 2024

9.00 – 10.00	POSTER SESSION III
10.00 – 10.15	SUMMARY AND CONFERENCE CLOSURE
11.00 – 15.00	THE SIGHTSEEING TOUR OF SANDOMIERZ
15.00 – 16.00	LUNCH
16.30	Departure to Lublin via conference bus

* All times are in the CET time zone (UTC+1)

Wednesday 27.11.2024		
9.00	**DEPARTURE to Sandomierz** **(from Lublin University of Technology, ul. Nadbystrzycka 36D)**	
12.30-13.00	**OPENING OF CONFERENCE AND WELCOME SPEECHES –** conference room at Hotel Mały Rzym	
13.00–13.30	***PLENARY LECTURES I*** *BEYOND TRADITIONAL DEM: COUPLING ANSYS ROCKY AND ANSYS FLUENT* *– Maciej Szudarek, PhD*	
13.30-14.00	***PLENARY LECTURES II*** *APPLICATION OF MACHINE LEARNING TO MONITORING INDUSTRIAL TANK REACTORS USING TOMOGRAPHY* *– Grzegorz Kłosowski, PhD*	
14.00–15.00	*Lunch*	
15.00–15.30	***PLENARY LECTURES III*** *THE USE OF OPTICAL METHODS TO MEASURE THE MOST EFFORTED CROSS-SECTIONAL AREA IN THE TENSILE TEST* *– Marcin Kneć, PhD; Paweł Szerszeń, M.Eng.*	
15.30–16.45	**SESSION I "COMPUTATIONAL FLUID DYNAMICS (CFD)"**	
	Embarek Douroum Amar Kouadri Sofiane Khelladi Mokhtar Zaitri	THERMO-HYDRAULIC INVESTIGATION OF MIXING EFFICIENCY AND ENTROPY GENERATION USING NON-NEWTONIAN FLUIDS IN SHORT MICRODEVICES
	Amar Kouadri Embarek Douroum Sofiane Khelladi Tayeb Benlaib Mokhtar Zaitri	CFD ANALYSIS OF THERMO-HYDRAULIC NEWTONIAN FLUIDS MIXING WITHIN SHORT MICROFLUIDIC DEVICES
	Paweł Capała Monika Ruszak Zbigniew Czyż Anna Rudawska	CFD INVESTIGATION OF THE TAIL GAS PURIFYING IN A NITRIC ACID PLANT
	Artur Szajding Andrzej Gołdasz Łukasz Łach Pavel Eichler	THE IMPACT OF TUBE ARRANGEMENT IN LATENT HEAT THERMAL ENERGY STORAGE (LHTES) ON THE MELTING RATE OF PHASE CHANGE MATERIAL (PCM)
	Jacek Czarnigowski Krzysztof Skiba	OPTIMIZATION OF THE SHAPE OF A HIGH-PERFORMANCE VEHICLE USING CFD
16.45 – 17.00	*COFFEE BREAK*	

17.00 – 18.00	**SESSION II "ARTIFICIAL AND COMPUTATIONAL INTELLIGENCE"**	
	Grzegorz Kozieł Liudmyla Malomuzh	3D MODEL FINGERPRINTING SCHEME
	Kinga Chwaleba Weronika Wach	EFFICIENT SOUND CLASSIFICATION WITH MEL SPECTROGRAM DECOMPOSITION AND INNOVATIVE DATASET
	Bartosz Sterniczuk Małgorzata Charytanowicz	AN ENSEMBLE TRANSFER LEARNING MODEL FOR BRAIN TUMORS CLASSIFICATION USING CNN
	Michał Staniszewski Grzegorz Łagód	ADVANCED SYSTEMS SUPPORTING IMAGE ACQUISITION AND MANIPULATION IN THE STUDY AND MONITORING OF ACTIVATED SLUDGE
17.00–19.00	**WORKSHOP BY CARL ZEISS Sp. z o.o.**	
18.00–18.10	*Group photo*	
18.10–19.00	**SESSION POSTER I**	
P – 1	Michał Styła Dominik Gnaś Przemysław Adamkiewicz	ADVANCEMENTS IN REFLECTIVE TOMOGRAPHY FOR INDOOR HUMAN DETECTION
P – 2	Michał Styła Dominik Gnaś Przemysław Adamkiewicz	ENHANCING ASSET MANAGEMENT WITH HIGH-FREQUENCY SIGNAL ANALYSIS IN DISTRIBUTED SYSTEMS
P – 3	Michał Maj Tomasz Cieplak Damian Pliszczuk Łukasz Maciura	OPTIMIZING DEEP LEARNING MODELS FOR REAL-TIME APPLICATIONS THROUGH KNOWLEDGE DISTILLATION
P – 4	Barbara Stefaniak Amelia Kosior-Romanowska Paweł Tchórzewski Anna Iwanicka-Maciura Dariusz Wójcik Tomasz Rymarczyk	ENHANCING LUNG DISEASE DIAGNOSTICS USING ELECTRICAL IMPEDANCE TOMOGRAPHY
P – 5	Krzysztof Król Michał Gołąbek Tomasz Rymarczyk	ADVANCED ULTRASONIC TOMOGRAPHY TECHNIQUES FOR ENHANCED INDUSTRIAL MONITORING
P – 6	Krzysztof Król Grzegorz Rybak Dariusz Majerek Bartosz Przysucha Tomasz Rymarczyk Konrad Niderla	ADVANCEMENTS IN ULTRASONIC TOMOGRAPHY FOR INDUSTRIAL QUALITY CONTROL

P – 7	Tomasz Rymarczyk Mariusz Mazurek Marcin Dziadosz Grzegorz Kłosowski Dariusz Wójcik Krzysztof Król	INTEGRATING NEURAL NETWORKS WITH WEARABLE SENSORS FOR NON-INVASIVE URINARY TRACT MONITORING USING ELECTRICAL IMPEDANCE TOMOGRAPHY
P – 8	Michał Gołąbek Tomasz Rymarczyk Piotr Bożek Daria Stefańczak Dariusz Wójcik	ADVANCING LONG-TERM UROLOGICAL MONITORING WITH INTEGRATED ULTRASOUND AND IMPEDANCE TOMOGRAPHY
P – 9	Tomasz Rymarczyk Mariusz Mazurek Marcin Dziadosz Grzegorz Kłosowski Dariusz Wójcik Krzysztof Król	ENHANCING PROCESS CONTROL WITH ADVANCED ELECTRICAL TOMOGRAPHY TECHNIQUES
P – 10	Grzegorz Kłosowski Tomasz Rymarczyk Monika Kulisz Dariusz Wójcik Konrad Niderla	ENHANCED MONITORING OF INDUSTRIAL REACTORS USING ADVANCED LSTM NETWORKS WITH SELF-ATTENTION LAYERS
P – 11	Agnieszka Bojanowska Monika Kulisz Alfonso Infante-Moro	MAKING MANAGEMENT DECISIONS BASED ON ENVIRONMENTAL PARAMETERS IN A RETAIL OUTLET USING MACHINE LEARNING METHODS
P – 12	Bartłomiej Ambrożkiewicz Zbigniew Czyż	ENHANCING PIEZOELECTRIC ENERGY HARVESTERS WITH HYBRID VIBRATIONAL EXCITATION
P – 13	Olga Orynycz	ANALYTICAL, COMPUTER AND LABORATORY MODELLING OF THE EFFECT OF THE FUEL USED IN THE SPARK IGNITION ENGINE OF THE SELECTED VEHICLE ON THE OPERATING PARAMETERS AND EXHAUST GAS COMPOSITION
P – 14	Michał Staniszewski Aleksandra Kozłowska Julia Sierniawska Mateusz Zagojski Patryk Osuch Tymur Reshetnyk Roman Babko Grzegorz Łagód	APPLICATION OF COMPUTER PROTOTYPING AND 3D PRINTING IN SAMPLING KITS AND PREPARATION TOOLS FACILITATING PERIPHYTON SLICES FOR BIOINDICATION STUDIES OF SURFACE WATER QUALITY

P – 15	Aleksandra Kołowska Bartosz Bomba Joanna Czerpak Marcin Widomski Grzegorz Łagód	APPLICATION OF BIM SOFTWARE TO PROTOTYPE THE CONSTRUCTION SOLUTIONS RELATED TO SUSTAINABLE WATER MANAGEMENT IN URBAN AREAS
P – 16	Bartosz Bomba Michał Staniszewski Joanna Czerpak Marcin K. Widomski Grzegorz Łagód	APPLICATION OF 3D PRINTING FOR PROTOTYPING AND TESTING CONSTRUCTION SOLUTIONS IN THE FIELD OF LID AND RAINWATER HARVESTING
P – 17	Mateusz Walo Dariusz Majerek Tetyana Kuzmina Grzegorz Łagód	APPLICATION OF DEEP LEARNING METHODS IN AUTOMATIC IMAGE ANALYSIS OF MICROSCOPIC SAMPLES
P – 18	Michał Staniszewski Marcin Dziadosz Dariusz Majerek Roman Babko Grzegorz Łagód	RESEARCH ON ACTIVATED SLUDGE FOR THE SELECTION OF ORGANISMS FOR ASSESSING ITS CONDITION AND THE POSSIBILITY OF AUTOMATION IN THE PERSPECTIVE OF BUILDING AN ELECTRONIC EYE
P – 19	Maria Skublewska-Paszkowska Pawel Powroznik Edyta Łukasik Jakub Smolka	TENNIS PATTERNS RECOGNITION BASED ON A NOVEL TENNIS DATASET - 3DTENNISDS
P – 20	Michał Awtoniuk Sebastian Hensler	IMPACT OF REGRESSORS SELECTION ON SYSTEM IDENTIFICATION BY MEANS OF NARX-RF MODEL
P – 21	Mariusz Walczak Mirosław Szala Weronika Henzler Małgorzata Grądzka-Dahlke Dariusz Perkowski Marzena Tokarewicz Wojciech J. Nowak Tadeusz Kubaszek Andrzej Gradzik	THE EFFECTS OF ADDING Ti ON THE CORROSION RESISTANCE AND HARDNESS OF AL0.7CoCrFeNi HIGH-ENTROPY ALLOYS
P – 22	Kacper Szatkowski Zbigniew Czyż Tomasz Zahorski	WIND TUNNEL ANALYSIS OF THE AERODYNAMIC PROPERTIES OF A TRAINER-COMBAT AIRCRAFT MODEL

P – 23	Tomasz Szymczyk Piotr Czajka	ANALYSIS OF THE POSSIBILITY OF HIDING DECOMPOSED INFORMATION IN A VIRTUAL REALITY ENVIRONMENT
P – 24	Paweł Dymora Mirosław Mazurek Mikołaj Piątek	PERFORMANCE EVALUATION OF SELECTED CONTAINERIZATION METHODS IN WEB SERVICES APPLICATIONS
P – 25	Paweł Dymora Mirosław Mazurek Kamil Łyczko Zdeněk Hadaš	ANALYSIS OF THE TIME SLOT LENGTH IMPACT OF SELECTED DATA LINK LAYER PROTOCOLS (B-MAC, X-MAC, AND LMAC) ON ENERGY RESOURCE CONSUMPTION IN WSNs
P – 26	Katarzyna Mróz	ANALYSIS OF VISUAL PERCEPTION IN CHILDREN USING AN EYE TRACKER
P – 27	Andrzej Komorek Robert Bąbel	THE INFLUENCE OF 3D PRINTING DIRECTION ON THE MECHANICAL PROPERTIES OF MANUFACTURED ELEMENTS
P – 28	Syed Amjad Ahmed Grzegorz Litak Mateusz Waśkowicz Dineshkumar Ravi Abhijeet M. Giri Jacek Caban	RESPONSE OF THE AIR FLOW ENERGY HARVESTER WITH TWO SIDE-BY-SIDE BLUFF BODIES OF VARIOUS SHAPES
20.00	GALA DINNER at the Restaurant of the Hotel	

Thursday, 28.11.2024		
8.30	REGISTRATION OPENING	
09.00 – 9.30	***PLENARY LECTURES IV*** *APPLICATION OF ELECTROMAGNETIC SIMULATIONS IN CALCULATING ELECTROMAGNETIC COMPATIBILITY (EMC) OF DEVICES AND ENVIRONMENTAL PROTECTION* *– Rafał Wojciechowski, Dominik Gawle*	
9.30 – 10.00	***PLENARY LECTURES V*** *FRACTIONAL-ORDER MODELING OF HEAT AND MOISTURE TRANSFER IN ANISOTROPIC MATERIALS* *– Kazimierz Drozd, PhD*	
10.00– 10.30	COFFEE BREAK	
10.30 – 11.30	**SESSION III "APPLICATION OF COMPUTER PROGRAMS IN TECHNOLOGY"**	
	Weronika Wach Kinga Chwaleba	GAP FILLING ALGORITHM FOR MOTION CAPTURE DATA TO CREATE REALISTIC VEHICLE ANIMATION
	Marta Dziuba-Kozieł Grzegorz Kozieł Damian Harasim Piotr Kisała Marcin Kochanowicz	MEASUREMENT OF THE ROTATION OF THE POLARISATION PLANE WITH TFBG AND DWT USAGE
	Patryk Organiściak Paweł Kuraś Andrzej Paszkiewicz Paweł Dymora Marek Bolanowski Mirosław Mazurek Bartosz Kowal Dominik Strzałka Michał Ćmil	DETECTING INCIDENTS AND ANOMALIES IN SDN-BASED IMPLEMENTATIONS OF CRITICAL INFRASTRUCTURE RESULTING IN ADAPTIVE SYSTEM CHANGES
	Magdalena Piłat-Rożek Ewa Łazuka Grzegorz Łagód	NONLINEAR MULTIDIMENSIONALITY REDUCTION METHODS FOR VISUALIZATION AND CLASSIFICATION OF GAS SENSOR ARRAY DATA
11.30-11.45	COFFEE BREAK	
11.45-13.00	**SESSION IV "ADVANCED METHODS IN STRUCTURAL ANALYSIS AND MATERIAL ENGINEERING"**	
	Serhii Kharchenko Sylwester Samborski Jakub Paśnik Farida Kharchenko	THE NATURAL OSCILLATIONS OF PERFORATED SIFTING SURFACES WITH EPICYCLOIDAL HOLES

	Marek Rośkowicz Ryszard Chachurski Michał Jędrak	ANALYSIS OF UAV WATER LANDING
	Karolina Płatek Leszek Łatka Anna Gibas Tomasz Kiełczawa	THE EFFECT OF KEY PROCESS PARAMETERS ON MICROSTRUCTURE AND PHOTOCATALYTIC PROPERTIES OF TiO_2 COATINGS MANUFACTURED BY APS
	Leszek Chowaniec Jarosław Piątkowski	EFFECT OF THE REFINING PROCESS ON POROSITY AND SELECTED MECHANICAL PROPERTIES OF ALSI7MG ALLOY PRESSURE CASTINGS
	Quirino Estrada Jarosław Zubrzycki Elva Lilia Reynoso Alejandro Rodriguez-Mendez Julio Vergara Vazquez Aztlan Bastarrachea Jesus Silva Aceves Manuel de Jesus Nandayapa Francisco Aguilera Lara Wiebe	NUMERICAL ANALYSIS OF THE CRASHWORTHINESS PERFORMANCE OF MULTICELL TUBES UNDER OBLIQUE LOADS
13.00 – 14.00	**LUNCH**	
14.00 – 16.00	**SESSION V "COMPUTER SIMULATIONS OF PROCESSES AND PHENOMENA"**	
	Michał Cioch Monika Kulisz Łukasz Kański	IMPLEMENTING AI COLLABORATIVE ROBOTS IN MANUFACTURING: MODELING ENTERPRISE CHALLENGES IN INDUSTRY 5.0 WITH FUZZY LOGIC
	Dariusz Kalinko Marian Janusz Łopatka Arkadiusz Rubiec Piotr Krogul	SIMULATIONS OF THE GROUND PRESSURE EXERTED BY DEMINING ROLLERS WITH RIGID WHEELS
	Mirosław Przybysz Tomasz Muszyński Karol Cieślik Karol Kończalski	SIMULATION STUDIES ON THE INFLUENCE OF CLEARANCES ON THE STEERING STABILITY OF ARTICULATED TRACKED UGVs
	Bartosz Kowal Dominik Strzałka	LONG-RANGE DEPENDENCIES AND STATISTICAL SELFSIMILARITY IN COMPUTER SYSTEMS PROCESSING
	Waldemar Samociuk Edwin Hevorkian Paweł Stączek	CONTROL OF AN AC POWERED DEVICE FOR ELECTROCONSOLIDATION OF CERAMICS

	Abhijeet M. Giri Grzegorz Litak Dineshkumar Ravi	NUMERICAL AND EXPERIMENTAL STUDIES ON THE PERFORMANCE A VORTEX-INDUCED VIBRATION ENERGY HARVESTER
	Dineshkumar Ravi Grzegorz Litak Abhijeet M. Giri Mateusz Waśkowicz	EXPERIMENTAL AND NUMERICAL INVESTIGATION ON THE EFFECT OF PASSIVE JET CONTROL SYSTEM ON THE PERFORMANCE OF A VORTEX INDUCED VIBRATION ENERGY HARVESTER SYSTEM
	Edyta Wojtaś Monika Kulisz Justyna Kujawska	ASSESSMENT OF THE POTENTIAL FOR USING MACHINE LEARNING METHODS TO FORECAST SOIL MOISTURE
16.00-16.30	Coffee break	
16.30-17.30	**SESSION VI "PRODUCTION ENGINEERING, MANAGEMENT AND QUALITY CONTROL"**	
	Adam Deptuła Piotr Osiński	ANALYSIS OF OPERATING PARAMETERS IN INNOVATIVE GEAR PUMPS WITH INVOLUTE PROFILES
	Andrzej Chmielowiec Sylwia Sikorska-Czupryna Leszek Klich Weronika Woś Paweł Kuraś	OPTIMIZATION OF QUALITY CONTROL PROCESSES USING THE NPGA GENETIC ALGORITHM
	Andrzej Chmielowiec Paweł Żurawski Sylwia Sikorska-Czupryna Leszek Klich Patryk Organiściak	APPLICATION OF NEURAL NETWORKS FOR DEFECT DETECTION IN ROTATIONALLY SYMMETRIC COMPONENTS
	Jakub Pizoń Łukasz Kański Monika Kulisz Jan Chadam Eduardo Sánchez García	USING BUSINESS PROCESS MODEL AND NOTATION 2.0 TO DEPLOY COBOTS IN A MANUFACTURING SYSTEM – CASE STUDY
17.45 – 19.00	POSTER SESSION II	
P – 1	Krzysztof Skiba Dariusz Kuś Eligiusz Pawłowski Jarosław Sikora	THERMIONIC ENERGY CONVERTER - MODEL STUDIES OF TEMPERATURE DISTRIBUTION OF CONVERTER COMPONENTS

P – 2	Pawel Powroznik Maria Skublewska-Paszkowska Katarzyna Nowomiejska Andreas Aristidou Andreas Panayides Robert Rejdak	DEEP CONVOLUTIONAL GENERATIVE ADVERSARIAL NETWORKS IN RETINITIS PIGMENTOSA DISEASE IMAGES AUGMENTATION AND DETECTION
P – 3	Ewa Jonda Tatiana Karkoszka Leszek Łatka Zuzanna Gumkowska	CONCEPT OF PROCESS OPTIMIZATION IN A MINING MACHINERY PRODUCTION COMPANY USING SELECTED LEAN MANUFACTURING TOOLS
P – 4	Mariusz Kamiński	APPLICATION OF MACHINE LEARNING METHODS IN THE ANALYSIS OF TRIBOLOGICAL PROPERTIES OF NITROGEN ION-IMPLANTED INCONEL 718 NICKEL ALLOY
P – 5	Ghazwan A. Mijwil Łukasz Gierz Bashar S. Falih	DETECTING CLUSTERED FRUITS USING A HYBRID OF CONVOLUTIONAL NEURAL NETWORKS AND MACHINE LEARNING CLASSIFIERS. CASE STUDY: GRAPES
P – 6	Tomasz Miłek	THE INFLUENCE OF SELECTED TECHNOLOGICAL PARAMETERS ON CHANGES IN THE FLANGING LOAD
P – 7	Jerzy Montusiewicz Aleksandra Szaja Agnieszka Montusiewicz Magdalena Lebiocka	MULTI-CRITERIA DECISION SUPPORT IN THE EVALUATION OF HYDRODYNAMIC CAVITATION EFFECTS – A CASE STUDY
P – 8	Michał Sąsiadek Waldemar Woźniak Maciej Niedziela	DEVELOPMENT AND IMPLEMENTATION OF THE INNOVATIVE SENDER RECEIVER ORGANIZATIONAL SYSTEM – ISNOO
P – 9	Włodzimierz Kos	APPLICATION OF FEM MODELLING IN CAD SYSTEMS FOR THE OPTIMISATION OF CAR TRAILER STRUCTURES IN TERMS OF MASS REDUCTION AND STIFFNESS IMPROVEMENT
P – 10	Michał Ćmil Dominik Strzałka Franciszek Grabowski Paweł Kuraś	NEW APPROACHES TO GENERALIZED LOGISTIC EQUATION WITH BIFURCATION GRAPH GENERATION TOOL
P – 11	Paweł Mirek Marcin Panowski	ANALYSIS OF THE POSSIBILITY OF USING PV SOURCES FOR AUTONOMOUS CULTIVATION OF NEGATIVELY PHOTOBLASTIC SEEDS
P – 12	Anna Choma Paweł Obstawski	MICROCHANNEL BEAM HEAT EXCHANGER POWERED BY ENVIRONMENTALLY FRIENDLY REFRIGERANT (R290)

P – 13	Michał Awtoniuk Paweł Obstawski Jacek Słoma, Krzysztof Górnicki	CONTROL SYSTEM FOR THE RECOVERY OF TECHNOLOGICAL WASTE HEAT IN THE STRETCH FILM PRODUCTION PROCESS
P – 14	Grzegorz Winiarski	DESIGN AND STRENGTH ANALYSIS OF AN DEVICE FOR METAL FORMING OF HOLLOW PRODUCTS WITH FLANGES
P – 16	Adam Deptuła Maria Natorska Krzysztof Prażnowski Jarosław Mamala Kamil Urbanowicz	APPLICATION OF A DECISION CLASSIFIER TO EVALUATE ENERGY CONSUMPTION OF AN ELECTRIC VEHICLE UNDER NORMAL OPERATING CONDITIONS
P – 17	Łukasz Rykała Mirosław Przybysz Karol Cieślik Piotr Krogul Rafał Typiak Andrzej Typiak	RESEARCH ON SELECTED LOCATION ALGORITHMS FOR THE UGV OPERATING IN A FOLLOW-ME SCENARIO BASED ON ULTRA-WIDEBAND POSITIONING SYSTEM
P – 18	Dominik Ożóg Ryszard Leniowski	THE KINEMATICS OF THE MANIPULATOR WITH 1-DOF JOINTS AND CONTROLLED BY ELASTIC, INNER TIES
P – 19	Paweł Magryta Grzegorz Barański	SIMULATION OF TORQUE VARIATIONS IN A DIESEL ENGINE FOR LIGHT HELICOPTERS USING PI CONTROL ALGORITHMS
P – 20	Aleksander Świetlicki Mariusz Walczak Mirosław Szala	SURFACE CHARACTERISTIC OF 17-4PH DMLS STEEL AFTER HEAT TREATMENT AND SHOT PEENING PROCESS
P – 21	Anna Skic Karolina Beer-Lech Kamil Drabik Kamil Skic Zbigniew Stropek	ANALYSIS OF JAPANESE QUAIL BONE MECHANICAL PROPERTIES
P – 22	Łukasz Grabowski	SIMULATION RESEARCH OF THE TRUCK ENERGY EFFICIENCY
P – 23	Karolina Beer-Lech Anna Skic Kamil Skic Ana Amaro Ricardo Branco Augusta Neto Maria	THE STUDY OF THE MICROSTRUCTURE AND FUNCTIONAL PROPERTIES OF BIODEGRADABLE PSYLLIUM/THERMOPLASTIC STARCH FILMS

P – 24	Mariusz Kłonica	THE INFLUENCE OF SURFACE LAYER PREPARATION AND THERMAL SHOCKS ON THE STRENGTH OF THE ADHESIVE JOINT
P – 25	Paweł Obstawski Jacek Słoma Krzysztof Górnicki Michał Awtoniuk	NEW ENERGY-SAVING TECHNOLOGY FOR INDUSTRIAL STRETCH FOIL PRODUCTION
P – 26	Patryk Organiściak Paweł Kuraś Bartosz Kowal Adam Masłoń Sylwia Sikorska-Czupryna Bartosz Wadiak	ML-BASED PREDICTION OF BIOGAS PRODUCTION BASED ON SLUDGE CHARACTERISTICS IN FOUR SLUDGE DIGESTION TANKS WITH SOFTWARE TOOL - SDT2BIOGAS PREDICTOR TOOL
P – 27	Serhii Kharchenko Sylwester Samborski Farida Kharchenko Izabela Korzec-Strzałka	THE METHODOLOGY AND RESULTS OF DETERMINING THE GEOMETRIC DIMENSIONS OF LOOSE MATERIAL PARTICLES
P – 28	Jacek Caban	RESEARCH ON THE USE OF MULTIFREQUENCY EXCITATIONS FOR ENERGY HARVESTING IN AN COMBUSTION ENGINE
19.30	**DINNER**	

Friday 29.11.2024		
9.00 – 10.00	**POSTER SESSION III**	
P – 1	Magdalena Jastrzębska Anna Futa Zbigniew Suchorab	USING THE ANALYSIS OF COVARIANCE IN THE MOISTURE DETECTION TECHNIQUE
P – 2	Anna Futa Magdalena Jastrzębska, Zbigniew Suchorab	CALIBRATION FORMULAS IN MOISTURE DETECTION TECHNIQUE IN BUILDING MATERIALS IN TERMS OF POLYNOMIAL REGRESSION MODELS
P – 3	Maria Skublewska-Paszkowska Pawel Powroznik Marcin Barszcz Krzysztof Dziedzic Andreas Aristodou	IDENTIFYING AND ANIMATING MOVEMENT OF ZEIBEKIKO SEQUENCES BY SPATIAL TEMPORAL GRAPH CONVOLUTIONAL NETWORK WITH MULTI ATTENTION MODULES
P – 4	Robert Szczepaniak Paweł Przybyłek Katarzyna Krzysztofik	EFFECT OF THE AMOUNT AND LOCATION OF PHASE CHANGE MATERIALS IN A FIBRE REINFORCED COMPOSITE MATRIX ON ABLATIVE PROPERTIES
P – 5	Dariusz Majerek Michał Błaszczykowski Elżbieta Sędzielewska Paweł Tomiło Jarosław Pytka	A NOVEL MACHINE LEARNING SYSTEM FOR EARLY DEFECT DETECTION IN 3D PRINTING
P – 6	Marcin Badurowicz	FEASIBILITY OF THE USAGE OF LOW-QUANT LOCAL LLMS FOR ENTERPRISE KNOWLEDGE BASE QUESTION ANSWERING
P – 7	Zbigniew Czyż Paweł Karpiński Paweł Ruchała Jonas Matijosius	EVALUATION OF THE INFLUENCE OF THE SUPPORT ON THE AERODYNAMIC CHARACTERISTICS OF THE TESTED OBJECT
P – 8	Łukasz Warguła Carla Nati Bartosz Wieczorek Michał Bembenek	THE CO_2 EMISSION BALANCE AND ABILITY TO CHIP WOOD BY 10 KW MACHINES USED IN URBAN AREAS IN TERMS OF INCREASING INTEREST IN USING WOOD BIOMASS RESOURCES FOR PERSONAL USE
P – 9	Bartosz Wieczorek Łukasz Warguła Olga Zharkevich, Łukasz Gierz Łukasz Wojciechowski Karolina Perz	THE STUDY OF THE IMPACT OF OIL TYPE AND THROTTLING PRESSURE ON THE VIBRATIONS OF A GEAR PUMP

P – 10	Jacek Zaburko Joanna Szulżyk-Cieplak Grzegorz Łagód	EVALUATION OF AGITATOR PERFORMANCE CHARACTERISTICS IN AN ACTIVATED SLUDGE BIOREACTOR DETERMINED BY BIOMARKERS
P – 11	Waldemar Woźniak Maciej Niedziela Michał Sąsiadek	ANALYSIS OF THE REAL-LIFE MANUFACTURING PROCESS OF SPUNLACE NONWOVENS IN MODERN, DOUBLE-DRUM CARDS
P – 12	Maciej Niedziela Michał Sąsiadek Waldemar Woźniak	MODELLING THE MASS BALANCE OF A REAL-LIFE MANUFACTURING PROCESS OF SPUNLACE NONWOVENS ON A HIGH-PERFORMANCE PRODUCTION LINE
P – 13	Szymon Karski Mirosław Szala	THE INFLUENCE OF RESISTANCE PROJECTION WELDING PARAMETERS OF STEEL NUTS ON THE MICROSTRUCTURE AND PROPERTIES OF JOINTS
P – 14	Jan Kosek Mirosław Szala	THE INFLUENCE OF RESISTANCE SPOT WELDING PARAMETERS ON THE MICROSTRUCTURE AND PROPERTIES OF STEEL JOINTS
P – 15	Nikola Woźniak Julia Wójtowicz Klaudia Tarach Leszek Łatka Mirosław Szala	MICROSTRUCTURE AND PROPERTIES OF YSZ CERAMIC COATINGS DEPOSITED BY APS
P – 16	Robert Szczepaniak Mazen Mousa M Alkhathami Mateusz Mucha Kacper Karpiński Aneta Krzyżak Ewelina Kosicka Emerson Coy Mikołaj Kościński	EFFECT OF HEAT TREATMENT AND MWCNT REINFORCEMENT ON THE TRIBOLOGICAL PROPERTIES OF MGS L285 EPOXY RESIN
P – 17	Joanna Masiewicz Paweł Przybyłek Robert Szczepaniak Tomasz Zahorski Marcin Kostrzewa Mateusz Czyż	IMPACT DAMAGE TOLERANCE OF MULTILAYER EPOXY-GLASS COMPOSITES WITH XPS CORE AND POLYURETHANE PREPOLYMER MODIFIED MATRIX
P – 18	Łukasz Omen Andrzej J. Panas Przemysław Wajdzik Robert Szczepaniak	STUDY OF THE EFFECT OF MICROENCAPSULATED PHASE CHANGE MATERIAL PARTICLES ADDITION TO EPOXY RESIN ON THE EFFECTIVE THERMAL DIFFUSIVITY OF THE RESULTING COMPOSITE STRUCTURE

P – 19	Vasyl Mykhailiuk Yevstakhiy Kryzhanivskyy Yurii Mosora Ruslan Deineha Damian Dzienniak Szymon Bajda Michał Bembenek	VERIFICATION OF TENSILE TESTING AND FEM MODELING OF SILICONE SKR-788 SAMPLES
P – 20	Jacek Janiszewski Andrzej Komorek Rafał Bieńczak Kacper Charkot Tomasz Łusiak	THE INFLUENCE OF TEMPERATURE ON THE MECHANICAL PROPERTIES OF A GFRP MADE BY AN INFUSION METHOD
P – 21	Rafał Bieńczak Jacek Janiszewski Andrzej Komorek Szymon Wasilewski Tomasz Łusiak Kamil Krasuski	THE INFLUENCE OF THE MATRIX PROPERTIES ON MECHANICAL PROPERTIES OF A GFRP MADE BY THE INFUSION METHOD
P – 22	Wojciech Okuniewski Mariusz Walczak, Dariusz Chocyk	PROPERTIES OF THE SURFACE LAYER OF TITANIUM ALLOY Ti-6Al-4V PRODUCED BY DMLS TECHNOLOGY AFTER THE SHOT PEENING TREATMENT
P – 23	Robert Szczepaniak Przemysław Sapiński Aneta Krzyżak Naje Deefallah	EFFECT OF CURING TEMPERATURE OF AERONAUTICAL EPOXY RESIN USED FOR ABLATIVE SHIELDING ON SOFTENING AND DEFLECTION TEMPERATURE
P – 24	Weronika Henzler Mirosław Szala Tomasz Pałka Bernard Wyględacz Artur Czupryński Leszek Łatka	COMPARISON OF CAVITATION EROSION OF NiCrBSi AND AISI 316L LAYERS DEPOSITED BY POWDER PLASMA TRANSFERRED ARC WELDING
P – 25	Robert Szczepaniak Zbigniew Czyż Robert Bąbel Amadeusz Mańka Tomasz Zahorski Łukasz Omen Ewelina Kosicka Jonas Matijosius, Japhet Noubiap Ngouobe	APPLICATION OF CAD DESIGN IN MODELLING COMBAT DRONES FOR AERODYNAMIC CHARACTERISTICS IDENTIFICATION
10.00 – 10.15	SUMMARY AND CONFERENCE CLOSURE	
11.00 – 15.00	THE SIGHTSEEING TOUR OF SANDOMIERZ	
15.00 – 16.00	LUNCH	
16.30	DEPARTURE TO LUBLIN VIA CONFERENCE BUS	