

CMES 2026 General Programme

Wednesday, 18.11.2026

8.00	Tour bus departure from Lublin University of Technology to Uroczysko Spa & Wellness Hotel in Cedzyna near Kielce, Poland
12.30–13.00	Opening of the conference and welcome speeches
13.00–13.30	Plenary Lectures I
13.30–14.00	Plenary Lectures II
14.00 – 14.15	Group photo
14.15–15.00	Lunch break
15.00–15.30	Plenary Lectures III
15.30–16.45	Special Session
16.45–17.00	Coffee break
17.00–18.15	Session I
18.15–19.15	Poster Session I
20.00	Gala Dinner

Thursday, 19.11.2026

7.30-8.15	Active Start: CMES Jogging Session. <i>“Follow the Science!”</i>
8.30	Registration
9.00-9.30	Plenary Lectures IV
9.30-10.00	Plenary Lectures V
10.00-10.15	Coffee break
10.15-11.45	Session II
11.45-12.00	Coffee break
12.00-13.30	Poster Session II
13.30-14.30	Lunch break

14.30-15.30	Session III
15.30-15.45	Coffee break
15.45-17.15	Session IV
17.15-17.30	Coffee break
17.30-18.45	Poster session III
19.30	Dinner

Friday, 20.11.2026

9.00-10.00	Poster session IV
10.00-10.15	Summary and conference closure
11.00-15.00	The sightseeing tour
15.00-16.00	Lunch break
16.30	Departure to Lublin via conference bus

Wednesday 18.11.2026		
8.00	Tour bus departure from Lublin University of Technology to Uroczysko Spa & Wellness Hotel in Cedzyna near Kielce, Poland	
12.30–13.00	Opening of Conference and Welcome Speeches – conference room at Hotel Uroczysko Spa & Wellness Hotel	
13.00–13.30	Plenary Lectures I <i>DATA AND MODELS USED IN ENGINEERING APPLICATIONS– Hasilova Kamila, Ph.D.</i>	
13.30–14.00	Plenary Lectures II <i>EVALUATION OF THE EFFECTIVENESS OF RADAR DRONE DETECTION: THE APPLICATION OF COMPUTER SIMULATIONS – Przemysław Turos, Symkom Sp. z o.o.</i>	
14.00-14.15	Group photo	
14.15–15.00	Lunch	
15.00–15.30	Plenary Lectures III <i>LIVING ON THE EDGE: EDGE AI FOR SPEED, PRIVACY, AND SELF-GOVERNANCE – Marcin Badurowicz, Ph.D. Eng.</i>	
15.30-16.45	Special Session <i>RECONSTRUCTION AND AERODYNAMIC INVESTIGATION OF THE LUBLIN R-XIIID AIRCRAFT – CURRENT PROGRESS AND PROJECT DEVELOPMENT</i>	
	Jarosław Mądro, Hubert Dębski	THE LUBLIN R-XIIID AIRCRAFT – HISTORICAL BACKGROUND AND STRUCTURAL CHARACTERISTICS
	Konrad Pietrykowski, Paweł Magryta, Rafał Kliza, Zbigniew Czyż	WIND TUNNEL AERODYNAMIC EXPERIMENTAL RESULTS OF THE LUBLIN R-XIIID AIRCRAFT MODEL
	Rafał Kliza, Zbigniew Czyż, Konrad Pietrykowski, Paweł Magryta	NUMERICAL INVESTIGATION OF THE AERODYNAMIC CHARACTERISTICS OF THE LUBLIN R-XIIID AIRCRAFT
	Paweł Wysmulski, Konrad Pietrykowski, Hubert Dębski, Michał Rogala, Jakub Paśnik, Mirosław Ferdynus, Kuba Rosłaniec	DEVELOPMENT OF A DIGITAL CAD MODEL OF THE LUBLIN R-XIIID AIRCRAFT
16.45-17.00	Coffee break	

17.00-18.15	Session I “Artificial and computational intelligence”	
	Mariusz Kamiński	MACHINE LEARNING CLASSIFICATION OF ION-IMPLANTED INCONEL 718
	Filip Wątorek; Patryk Lorenc; Ireneusz Dominik	NON-DESTRUCTIVE ANCHOR CONDITION CLASSIFICATION IN UNDERGROUND MINING USING FFT ANALYSIS AND TRANSFER LEARNING
	Mateusz Walo; Dariusz Majerek	A FINE-TUNED MULTI-AGENT LARGE LANGUAGE MODEL PLATFORM WITH RETRIEVAL-AUGMENTED GENERATION FOR CLINICAL CASE REPORT ANALYSIS
	Grzegorz Jabłoński; Mariusz Michalski; Norbert Grzesik; Marcin Markiewicz	FUZZY LOGIC CONTROLLER FOR AUTONOMOUS OBSTACLE AVOIDANCE IN A QUADROTOR UNMANNED AERIAL VEHICLE
	Mateusz Gogola; Jan Górecki	A DETERMINISTIC MEMORY ARCHITECTURE FOR LARGE LANGUAGE MODELS (LLM) WITH KNOWLEDGE LIFECYCLE MANAGEMENT (KLM)
18.15 – 19.15	Poster Session I	
P – 1	Piotr Maciak, Eryc Witkowski INFLUENCE OF SKIN MATERIAL AND SURFACE TREATMENT ON AERODYNAMIC PERFORMANCE	
P – 2	Anna Olszewicz, Jakub Kordowski MODELING AND ANALYSIS OF WING ICING ON A BOEING 737-800 AIRCRAFT USING ANSYS	
P – 3	Adam Deptuła, Patryk Machnik AN INTEGRATED BWM-FUZZY TOPSIS MODEL FOR STEEL STRUCTURE MANUFACTURER SELECTION: A CASE STUDY	
P – 4	Łukasz Grabowski, Jan Pytka, Zbigniew Czyż, Krzysztof Skiba MACHINE LEARNING-BASED PREDICTION OF AERODYNAMIC CHARACTERISTICS OF AN ELECTRIC UAV PROPULSION SYSTEM	
P – 5	Robert Bąbel CFD-BASED ANALYSIS OF LIFT AND DRAG CHARACTERISTICS OF A UAV SEAPLANE IN TRANSITIONAL FLOW REGIMES	
P – 6	Aleksandra Zarubajko, Łukasz Omen, Maciej Majcher, Michał Frant, Andrzej J. Panas CFD MODELING OF WATER AEROSOL FLOW IN AN ICING WIND TUNNEL	
P – 7	Mariusz Mazurek, Tomasz Rymarczyk, Marcin Dziadosz, Dariusz Wójcik, Michał Oleszek DIRECT NEURAL RECONSTRUCTION OF URINARY BLADDER IMAGES FROM WEARABLE ELECTRICAL IMPEDANCE TOMOGRAPHY DATA	
P – 8	Tomasz Rymarczyk, Marcin Dziadosz, Dariusz Wójcik, Mariusz Mazurek, Paweł Tchórzewski MONTE CARLO MODELLING OF LIGHT TRANSPORT FOR OPTICAL TOMOGRAPHY IN HETEROGENEOUS MEDIA	
P – 9	Dariusz Majerek, Dariusz Wójcik, Tomasz Rymarczyk PHYSICS-CONSTRAINED UNROLLED RECONSTRUCTION OF SLOWNESS MAPS IN ULTRASOUND TRANSMISSION TOMOGRAPHY	

P – 10	Dariusz Wójcik, Tomasz Rymarczyk, Michał Gołębek, Barbara Stefaniak, Oleksii Hyka MATRIX-FREE RECONSTRUCTION FOR PORTABLE 3D ULTRASONIC NDE
P – 11	Barbara Stefaniak, Dariusz Wójcik, Tomasz Rymarczyk STABLE CLASS-CONDITIONED QUANTISED VAE FOR SYNTHETIC LUNG DISEASE VOLUMES
P – 12	Mariusz Mazurek, Tomasz Rymarczyk, Dariusz Wójcik, Marcin Dziadosz MULTIMODAL NEURAL RECONSTRUCTION FOR HYBRID ULTRASOUND-IMPEDANCE TOMOGRAPHY OF THE LOWER URINARY TRACT
P – 13	Dominik Gnaś, Tomasz Rymarczyk, Dariusz Wójcik, Michał Oleszek MULTIMODAL EITS AND OPTICAL SENSING FOR NON-INVASIVE GLUCOSE MONITORING
P – 14	Michał Styła, Przemysław Adamkiewicz ENERGY-EFFICIENT UWB LOCALIZATION WITH MULTILATERATION FOR WAREHOUSE ASSET TRACKING
P – 15	Tomasz Rymarczyk, Paweł Kaleta, Marcin Dziadosz, Dariusz Wójcik, Michał Oleszek, Michał Styła AOA SENSORS AND CLUSTER TRIANGULATION FOR 3D INDOOR LOCALIZATION
P – 16	Grzegorz Rybak, Dariusz Wójcik, Tomasz Rymarczyk A FORMAL GRAPH MODEL OF AN EMBODIED DATA PUMP FOR IOT-MIXED REALITY INTEGRATION
P – 17	Jakub Pizoń, Łukasz Kański, Jan Chadam, Arkadiusz Gola AN AUDITABLE LARGE LANGUAGE MODEL- AND RETRIEVAL-AUGMENTED GENERATION DIGITAL QUALITY TWIN SUPPORTING SIMULATION-BASED VALIDATION AND SAFER DEFECT CONTROL IN INDUSTRY 4.0 AND 5.0 FOR PRODUCTION AND TECHNOLOGY MANAGEMENT
P – 18	Jarosław Tatarczak, Justyna Baran-Tatarczak MULTI-CRITERIA OPTIMIZATION OF UAV MEDICAL TRANSPORT CORRIDORS IN URBAN ENVIRONMENTS BASED ON COST SURFACE ANALYSIS
P – 19	Paweł Capała, Monika Ruszak, Zbigniew Czyż, Anna Rudawska NUMERICAL CFD ANALYSIS OF CATALYTIC BASKETS IN DUAL-BED CATALYTIC REACTORS
P – 20	Aidana Ussenova, Bakhtiyar Rzayev, Mukhtarbek Kakimov, Bauyrzhan Iskakov, Serik Tokayev, Gulnazym Ospankulova, Roza Abisheva, Michał Bembenek DEVELOPMENT OF TECHNOLOGY AND OPTIMIZATION OF AERODYNAMIC PARAMETERS OF WHEAT FLOUR BY DRY METHOD FOR STARCH AND PROTEIN FRACTIONS
P – 21	Dariusz Kalinko, Marian Łopatka, Piotr Krogul, Rafał Typiak, Jarosław Duda APPARATUS FOR FIELD TESTING AND VALIDATION OF NUMERICAL MODELS OF MINE-SOIL INTERACTION UNDER WHEEL OR TRACK PRESSURE
P – 22	Marcin Matczuk, Łukasz Grabowski, Grzegorz Kozieł, Marta Dziuba-Kozieł, Dominik Strzałka, Piotr Jakliński, Kamil Żyła, Jacek Kęsik MACHINE LEARNING-BASED ALGORITHM FOR ESTIMATING ENERGY EFFICIENCY OF PHOTOVOLTAIC PANELS IN PUBLIC TRANSPORT: CASE STUDY OF LUBLIN
P – 23	Adam Kuśmierowski, Krzysztof Skiba, Dariusz Kuś, Jarosław Sikora EXPERIMENTAL ANALYSIS OF CURRENT-VOLTAGE CHARACTERISTICS AND STATISTICAL PARAMETERS OF THE EMISSION CURRENT AS A FUNCTION

	OF TEMPERATURE AND ANODE WORK FUNCTION IN A THERMIONIC ENERGY CONVERTER
P – 24	Maciej Kowalski, Łukasz Omen, Andrzej J. Panas NUMERICAL ANALYSIS OF HEAT TRANSPORT IN DISPERSIVE COMPOSITES WITH MICROENCAPSULATED PCMS: INFLUENCE OF VOLUME FRACTION, ELEMENTARY CELL SIZE AND MODEL DIMENSIONALITY
P – 25	Aneta Misiak-Zawadzka, Maciej Majcher ANALYSIS OF THE INFLUENCE OF THE GROUND EFFECT ON THE BASIC AERODYNAMIC CHARACTERISTICS OF A WIG CRAFT WING
P – 26	Magdalena Paśnikowska-Łukaszuk, Zbigniew Suchorab EVALUATION OF MOISTURE CONTENT IN 600 AERATED CONCRETE USING TDR SENSORS WITH POLYLACTIDE HOUSING
P – 27	Aleksandra Prus, Kamil Jonak, Przemysław Krakowski, Robert Karpiński EFFECT OF BODY MASS INDEX ON KNEE JOINT VIBROARTHROGRAPHIC SIGNAL PARAMETERS
P – 28	Katarzyna Mróz RESTING-STATE EEG ACTIVITY AND ITS ASSOCIATIONS WITH SELECTED DIMENSIONS OF PSYCHOLOGICAL FUNCTIONING
P – 29	Daniel Plisau, Grzegorz Łagód ENTROPY-BASED INDICES IN ECONOMIC AND SOCIAL RESEARCH
P – 30	Wojciech Cel ASSESSMENT OF THE CARBON FOOTPRINT OF BIOCHAR PRODUCTION FROM SEWAGE SLUDGE USING CALCULATION METHODS
20.00	Gala Dinner

Thursday, 19.11.2026		
7.30–8.15	Active Start: CMES Jogging Session. <i>“Follow the Science!”</i>	
8.30	Registration opening	
9.00–9.30	Plenary Lecture IV MULTIPHYSICS ANALYSIS OF ELECTROMAGNETIC-THERMAL COUPLING IN CST STUDIO SUITE AND CO-SIMULATION WITH ABAQUS – Rafał M. Wojciechowski, D.Sc., Technia, Poland Dominik Gawle, SIMULIA Sales Representative at Dassault Systèmes	
9.30–10.00	Plenary Lecture V COMPUTATIONAL INTELLIGENCE FOR MANAGING MODERN PRODUCTION SYSTEMS – Jakub Pizoń, PhD, Eng.	
10.00–10.15	Coffee break	
10.15–11.45	Session II “Material Properties and Structural Performance”	
	<u>Damian Jokiel;</u> <u>Jan Górecki</u>	PRELIMINARY RESEARCH OF DENSITY INFILL INFLUENCE ON THE TENSILE STRENGTH OF THERMOPLASTIC POLYURETHANE (TPU) 3D PRINTED ELEMENTS IN FUSED DEPOSITION MODELING (FDM) METHOD
	<u>Szymon Karski;</u> Dariusz Chocyk; Mirosław Szala	INFLUENCE OF DEPOSITION RATE ON MICROSTRUCTURE AND MECHANICAL PROPERTIES OF TIN LAYERS: EXPERIMENT AND SIMULATION
	Jarosław Piątkowski	LASER SURFACE TREATMENT OF ALSI11CUNIMG PISTON ALLOY
	Quirino Estrada; Jose Manuel Cuenca Delgado; Eladio Martinez Rayon; Elva Reynoso; Alejandro Rodriguez-Mendez; Aztlán Bastarrachea; Jesus Silva; Manuel Nandayapa	EFFECT OF THE CROSS-SECTION ON THE ENERGY ABSORPTION AND BENDING BEHAVIOR OF BENT TUBES
	Jacek Czarnigowski; Jakub Jarosz; Magda Drożdziel-Jurkiewicz; Adrian Wróbel	MECHANICAL PROPERTIES OF FLAX FIBRE-REINFORCED BIO-COMPOSITES
	Mikołaj Sowa; Mirosław Szala	STAINLESS STEEL WELD OVERLAYS PROPERTIES AND ABRASIVE WEAR RESISTANCE
11.45–12.00	Coffee break	
12.00–13.30	Poster Session II	

P – 1	Robert Szczepaniak, Zuzanna Wilkosz, Robert Bąbel, Grzegorz Woroniak THE ROLE OF CARBON ADDITIVES IN SHAPING THE MECHANICAL PROPERTIES OF ABS AND ASA POLYMER FILAMENTS IN THE FDM PROCESS
P – 2	Wiktor Łykowski, Łukasz Gierz RESULTS OF LABORATORY TESTS OF THE STATIC AND DYNAMIC FRICTION COEFFICIENTS OF FERTILIZER GRANULES AGAINST THE STRUCTURAL MATERIALS OF SEED DRILLS USING A ROTARY TEST STAND
P – 3	Grzegorz Budzik, Andrzej Paszkiewicz, Lucjan Śnieżek, Mirosław Surowaniec, Kamil Burczy, Dariusz Rączka A MULTI-LAYER CYBER-PHYSICAL 3D PRINTING SECURITY FRAMEWORK FOR THE AEROSPACE AND DEFENSE INDUSTRY
P – 4	Wojciech Pudło, Grzegorz Kozłowski, Mateusz Mucha EFFECTIVENESS OF SELECTED NDT METHODS FOR INSPECTION OF A 12-PLY AEROSPACE CFRP LAMINATE
P – 5	Michał Rogala COMPOSITE FOAM BASED SANDWICH STRUCTURE SUBJECTED TO LOW-VELOCITY IMPACT
P – 6	Jacek Janiszewski, Andrzej Komorek, Rafał Bieńczak, Daniel Śliwiński THE INFLUENCE OF THE MOLD SIZE ON PROPERTIES OF GFRP MADE BY INFUSION METHOD
P – 7	Grzegorz Kłosowski, Tomasz Rymarczyk, Monika Kulisz, Konrad Niderla, Michał Oleszek, Paweł Olszewski MEASUREMENT-CONSISTENT HYBRID NEURAL RECONSTRUCTION FOR ELECTRICAL IMPEDANCE TOMOGRAPHY
P – 8	Monika Kulisz, Grzegorz Kłosowski, Tomasz Rymarczyk, Konrad Niderla MULTI-HEAD NEURAL RECONSTRUCTION OF 2D EIT IMAGES FOR INDUSTRIAL REACTOR MONITORING
P – 9	Mariusz Mazurek, Krzysztof Król, Edward Kozłowski, Monika Kulisz, Konrad Niderla, Grzegorz Kłosowski, Tomasz Rymarczyk ADAPTIVE INDUSTRIAL TOMOGRAPHIC RECONSTRUCTION THROUGH BIDIRECTIONAL LSTM-GUIDED ENSEMBLE SELECTION
P – 10	Barbara Stefaniak, Michał Gołąbek, Dariusz Wójcik, Monika Kulisz, Tomasz Rymarczyk PORTABLE MULTICHANNEL ULTRASONIC TOMOGRAPHY FOR THREE-DIMENSIONAL IMAGING OF CONCRETE DEFECTS
P – 11	Mariusz Mazurek, Krzysztof Król, Tomasz Rymarczyk, Monika Kulisz, Edward Kozłowski, Grzegorz Kłosowski NAR AND LSTM-DEPENDENT PREDICTION FOR EARLY WARNING OF ERRORS IN PROCESS TOMOGRAPHY
P – 12	Michał Styła, Przemysław Adamkiewicz AMPLITUDE-RANGE REFLECTANCE TOMOGRAPHY FOR ENERGY-EFFICIENT INDOOR OBJECT TRACKING
P – 13	Michał Maj, Tomasz Cieplak, Damian Pliszczyk, Jakub Pizoń MULTIMODAL AI AND EDGE INTELLIGENCE FOR CONTEXT-AWARE CUSTOMER RELATIONSHIP MANAGEMENT
P – 14	Michał Maj, Tomasz Cieplak, Damian Pliszczyk, Jakub Pizoń EXPLAINABLE LOCAL EVALUATION OF FACTUAL CONSISTENCY IN AUTOMATED CLINICAL SUMMARIES AGAINST SOAP REFERENCES
P – 15	Łukasz Maciura, Michał Maj, Tomasz Cieplak, Jakub Pizoń CROSS-SIGNER GENERALIZATION OF VISION-LANGUAGE EMBEDDINGS FOR POLISH FINGERSPELLING RECOGNITION

P – 16	Damian Bańkowski, Piotr Młynarczyk, Tomasz Miłek THE USE OF DIGITAL VOLUME CORRELATION WITH COMPUTED TOMOGRAPHY TO ANALYZE DISPLACEMENT AND WALL THICKNESS OF MULTI-OPERATIONAL PRESSING OF CYLINDRICAL ALUMINIUM EXTRUSIONS	
P – 17	Piotr Młynarczyk, Damian Bańkowski, Wojciech Depczyński STUDY OF THE INFLUENCE OF ESD PROCESS PARAMETERS AND A COMPARATIVE ANALYSIS OF MICROSCOPY AND COMPUTED TOMOGRAPHY IN THE QUALITATIVE ASSESSMENT OF COPPER COATINGS ON AN ALUMINIUM SUBSTRATE	
P – 18	Izabela Żaczek, Bernadetta Kowalczyk DESIGN AND EXPERIMENTAL VALIDATION OF A PROPELLER FOR AN UNMANNED AERIAL VEHICLE WITH MTOW UP TO 25 KG	
P – 19	Nikola Woźniak, Julia Wójtowicz, Klaudia Tarach, Mirosław Szala EXTRUSION OF ALUMINIUM ALLOY COMPONENTS AND SURFACE LAYER MODIFICATION	
P – 20		
P – 21	Bartosz Wieczorek, Weronika Wiatrowska, Aleksandra Świadek, Łukasz Warguła IMAGE-BASED CONTACT PATCH CHARACTERIZATION OF WHEELCHAIR TIRE–ROLLER INTERACTION USING CONVEX HULL AND ALPHA SHAPE ALGORITHMS	
P – 22	Weronika Wiatrowska, Aleksandra Świadek, Bartosz Wieczorek, Łukasz Warguła VERIFICATION OF FOREARM GRID GENERATION METHODS FOR EMG ELECTRODE PLACEMENT DURING WHEELCHAIR PROPULSION STUDIES	
P – 23	Armin Alavi, Kamil Urbanowicz A 1D-3D COUPLED NUMERICAL APPROACH TO INVESTIGATE WATER HAMMER IN A RESERVOIR PIPE VALVE SYSTEM USING REALISTIC VALVE CLOSURE MECHANISM	
P – 24	Monty J Singh, Balwinder Sodhi A DOMAIN-AGNOSTIC FRAMEWORK FOR UNCERTAINTY-GUIDED HYBRID SIMULATION IN DIGITAL TWINS	
P – 25	Grzegorz Łagód, Dariusz Majerek, Michał Staniszewski, Edyta Wojtaś, Aleksandra Kozłowska, Konrad Jamka APPLICATION OF AUTOMATED IMAGE ANALYSIS IN THE BIOINDICATIVE ASSESSMENT OF ACTIVATED SLUDGE PARAMETERS AND THE IMPACT OF TREATMENT PLANTS ON RECEIVING WATERS	
P – 26	Aleksandra Kozłowska, Michał Staniszewski, Roman Babko, Grzegorz Łagód ENTROPY-BASED ANALYSIS OF ACTIVATED SLUDGE PARAMETERS	
13.30–14.30	Lunch break	
14.30–15.30	Session III “Application of computer programs in technology”	
	Paweł Suchorab; Ewa Jakowiecka	RESILIENCE ANALYSIS OF A WATER DISTRIBUTION NETWORK UNDER FAILURE SCENARIOS IN THE AQUARDIS VIRTUAL CITY
	Weronika Henzler-Grzywna; Jacek Czarnigowski; Łukasz Grabowski	SIMULATION STUDIES OF THE SPRAY WASHING PROCESS
	Jan Górecki; Krzysztof Wałęsa	THE EFFECT OF TRANSITION RADIUS ON DRY ICE FLOW AND BOUNDARY FORCE DURING THE EXTRUSION PROCESS: AN ANALYTICAL-NUMERICAL-EXPERIMENTAL STUDY

	Dawid Tatarynow	ANALYSIS OF THE POTENTIAL FOR MODIFYING SELECTED COMBUSTION PARAMETERS OF RAPESEED OIL–N-HEXANE BLENDS IN A DIESEL ENGINE BY VARYING THE START-OF-INJECTION ANGLE
15.30- 15.45	Coffee break	
15.45– 17.15	Session IV “Computational fluid dynamics & Finite Element Method”	
	Marcin Dejewski; Tomasz Muszyński; Lucjan Śnieżek; Dariusz Kalinko	IDENTIFICATION OF EQUIVALENT STIFFNESS REPRESENTATION IN A SIMULATION MODEL OF A RIBBON PONTOON BRIDGE
	Daniel Bronisław Nycz; Rafał Gajda; Jacek Kühnl-Kinel; Adam Spurtacz	FANCY FENCE - A NEW TYPE OF ANTI-TERRORIST RETRACTABLE GATE - DESIGN AND REAL CRASH TEST
	Bartłomiej Ambrożkiewicz; Maciej Czarnacki	PHYSICS-INFORMED IDENTIFICATION OF RADIAL CLEARANCE IN A NONLINEAR 4-DOF ROLLING BEARING MODEL
	Andrzej Paszkiewicz; Dariusz Rączka	GEOMETRY-BASED DUAL-GRID CLUSTERING ALGORITHM (G2LEACH) FOR ENERGY-EFFICIENT WIRELESS SENSOR NETWORKS FOR IOT ENVIRONMENT
	Amar Kouadri; Embarek Douroum; Mokhtar Zaitri; Sofiane Khelladi; Samir Laouedj; Juan Pedro Solano	CFD INVESTIGATION OF THERMAL MIXING ENHANCEMENT OF SHEAR-THINNING FLUIDS IN SHORT PASSIVE TLCCM MICROMIXERS
	Embarek Douroum; Amar Kouadri; Sofiane Khelladi; Samir Laouedj; Abdelylah Benazza; Mokhtar Zaitri Juan Pedro Solano	COMPARATIVE ANALYSIS OF PASSIVE PLANAR MICROMIXERS FOR NEWTONIAN AND NON- NEWTONIAN FLUID MIXING: A NUMERICAL STUDY
17.15– 17.30	Coffee break	
17.30– 18.45	Poster session III	
P – 1	Michał Sąsiadek, Maciej Niedziela, Waldemar Woźniak, Tomasz Jachowicz, Jarosław Jajczyk, Arkadiusz Koziół, Tomasz Tramś EFFECT OF MATERIAL COMPOSITION AND EMBOSSED PROCESS PARAMETERS ON THE PUNCTURE RESISTANCE OF THREE-LAYER POLYETHYLENE FILMS WITH RECYCLED CONTENT	
P – 2	Waldemar Woźniak, Maciej Niedziela, Michał Sąsiadek, Tomasz Jachowicz, Jarosław Jajczyk, Arkadiusz Koziół, Tomasz Tramś DIRECTIONAL ANISOTROPY OF TEAR RESISTANCE IN EMBOSSED THREE- LAYER POLYETHYLENE FILMS CONTAINING RECYCLED MATERIAL	
P – 3	Maciej Niedziela, Waldemar Woźniak, Michał Sąsiadek, Tomasz Jachowicz, Jarosław Jajczyk, Arkadiusz Koziół, Tomasz Tramś	

	IDENTIFICATION OF A ROBUST EMBOSSING PROCESS WINDOW FOR THREE-LAYER RECYCLED POLYETHYLENE FILMS BASED ON MULTIPLE MECHANICAL PERFORMANCE CRITERIA
P – 4	Łukasz Kański EXPLAINABLE CNN-BASED BOTTLENECK DIAGNOSIS IN HUMAN-COBOT MANUFACTURING USING PROCESS HEATMAPS: AN OPERATIONS AND QUALITY MANAGEMENT PERSPECTIVE
P – 5	Patryk Organiściak, Arkadiusz Stęchły, Paweł Kuraś, Adam Masłoń, Anna Turek MACHINE-LEARNING-BASED PREDICTIVE CONTROL OF ANAEROBIC DIGESTION CONSIDERING METEOROLOGICAL CONDITIONS
P – 6	Patryk Organiściak, Mateusz Salach, Alicja Gerka, Krzysztof Demidowski, Paweł Kuraś, Karolina Kisała SCALABILITY ANALYSIS AND PERFORMANCE EVALUATION OF WEBRTC SYSTEMS USING THE INFRASTRUCTURE AS CODE PARADIGM AND CONTAINERIZED TRAFFIC GENERATORS
P – 7	Mariusz Kłonica, Oskar Sarnecki IMPLEMENTATION OF ADDITIVE MANUFACTURING TECHNOLOGY IN THREADED FASTENERS
P – 8	Marta Dziuba-Kozieł INVERSE DESIGN OF MULTIRING OPTICAL FIBRES USING MACHINE LEARNING FOR BEAM SHAPING APPLICATIONS
P – 9	Grzegorz Kozieł, Marta Dziuba-Kozieł, Damian Harasim, Piotr Kisała, Sylwester Nowocień LOW-COST MEASUREMENT OF LIGHT POLARISATION PLANE ROTATION USING DOUBLE TFBG SENSORS WITH POWER-BASED INTERROGATION
P – 10	Żaneta Anna Mierzejewska, Stanisław Dzielak, Anna Falkowska MICROHARDNESS-TOUGHNESS TRADE-OFF AND ANISOTROPY REDUCTION IN DMLS Ti6Al4V INDUCED BY POST-PROCESSING HEAT TREATMENT
P – 11	Żaneta Anna Mierzejewska, Nataša Trtić, Radmila Arbutina DEGRADATION BEHAVIOR OF RESIN-BASED COMPOSITES UNDER SIMULATED ORAL CONDITIONS: A COMPARATIVE STUDY OF MICROHARDNESS, SURFACE ROUGHNESS, AND WATER-RELATED PROPERTIES
P – 12	Bartosz Łata, Jacek Czarnigowski, Miłosz Chwiejczak, Wiktor Iskra, Iga Kopeć DESIGNING VEHICLE STRUCTURES USING MATERIALS WITH A LOW CARBON FOOTPRINT
P – 13	Radosław Kiciński, Bogdan Szturomski, Jamal Hamoud, Michał Grylewicz MODEL SIMPLIFICATIONS INFLUENCE ON A SMALL-CALIBRE PROJECTILE ARMOUR PENETRATION SIMULATIONS RESULTS
P – 14	Jarosław Zubrzycki, Quirino Estrada, Magda Wlazło EQUIVALENT STATIC FINITE ELEMENT ANALYSIS OF HUMAN SKULL LOADING UNDER CONDITIONS REPRESENTATIVE OF MOTORCYCLE COLLISIONS
P – 15	Dominik Ożóg, Wojciech Łabuński, Natalia Jajko, Eryk Sęk, Bartosz Stala EVALUATION OF DISTANCE METRICS FOR HUMAN POSE-LANDMARK TRAJECTORIES EXTRACTED WITH DIFFERENT POSE ESTIMATION MODELS
P – 16	Łukasz Rykała, Karol Cieślík, Marcin Dejowski, Mirosław Przybysz ULTRA-WIDEBAND-BASED VELOCITY ESTIMATION WITH KALMAN FILTERING FOR FOLLOW-ME UNMANNED GROUND VEHICLE APPLICATIONS
P – 17	Krzysztof Skiba, Robert Bąbel, Zbigniew Czyż, Paweł Karpiński, Bartłomiej Ambrożkiewicz

	DESIGN AND DEVELOPMENT OF AN INTEGRATED TEST BENCH FOR VIBRATION ENERGY HARVESTING WITH A MEASUREMENT AND CONTROL SYSTEM
P – 18	Mateusz Wańkowicz, Marek Borowiec, Marcin Fronc, Magdalena Przybylska–Fronc EXPERIMENTAL INVESTIGATION OF NONLINEAR DYNAMICS AND PIEZOELECTRIC RESPONSE OF AN AIRFLOW-INDUCED VIBRATING BEAM
P – 19	<u>Marcin Fronc</u>, Krzysztof Kolano, Grzegorz Litak, Magdalena Przybylska–Fronc, Mateusz Wańkowicz MATHEMATICAL MODELLING AND EXPERIMENTAL INVESTIGATION OF A BLDC-BASED ENERGY HARVESTER UNDER NONLINEAR MECHANICAL EXCITATION
P – 20	<u>Magdalena Przybylska–Fronc</u>, Grzegorz Litak, Marek Borowiec, Marcin Fronc, Mateusz Wańkowicz NUMERICAL AND EXPERIMENTAL INVESTIGATION OF THE DYNAMICS OF COUPLED ELASTIC BEAMS SUBJECTED TO MECHANICAL EXCITATION
P – 21	Magdalena Piłat-Rożek, Grzegorz Łagód MACHINE LEARNING MODELS TRAINED ON MULTIDIMENSIONAL GAS SENSOR SIGNALS WITH EXPLAINABLE AI INTERPRETATION FOR SURFACE WATER AND WASTEWATER CLASSIFICATION
P – 22	Diana Morzhak, Magdalena Piłat-Rożek, Aleksandra Kozłowska, Grzegorz Łagód THE USE OF SELECTED DEEP LEARNING METHODS FOR THE DETECTION AND CLASSIFICATION OF BIOLOGICAL OBJECTS ON DIGITAL IMAGES
P – 23	Albert Raczkiewicz, Magdalena Piłat-Rożek, Aleksandra Kozłowska, Grzegorz Łagód ANALYSIS OF MULTIDIMENSIONAL DATA CONTAINING PRECIPITATION VARIABILITY AND THE PRESENCE OF MICROORGANISMS IN THE BYSTRZYCA RIVER FOR ENVIRONMENTAL MONITORING PURPOSES
P – 24	Weronika Nadworska, Ewa Łazuka, Magdalena Piłat-Rożek AUTOENCODER-BASED REPRESENTATIONS FOR CRIME CLUSTERING
P – 25	Paweł Dymora, Mirosław Mazurek, Bartosz Nycz ANOMALY DETECTION IN MAVLINK TELEMETRY LOGS OF UNMANNED AERIAL VEHICLES USING DATA ANALYTICS METHODS
P – 26	Beata Surma, Grzegorz Łagód GIS-BASED AUTOMATION OF INPUT DATA PREPARATION FOR HYDRODYNAMIC STORMWATER SYSTEM MODELING
19.30	Dinner

Friday, 20.11.2026	
9.00–10.00	Poster session IV
P – 1	Łukasz Sobaszek, Bartłomiej Stadnik AI-BASED OPERATOR BEHAVIOR PREDICTION ALGORITHM FOR HUMAN-ROBOT COOPERATION
P – 2	Tomasz Szymczyk, Marcin Badurowicz ANALYSIS OF THE IMPACT OF NATURAL LANGUAGE SELECTION IN LARGE LANGUAGE MODELS (LLMs) ON ENERGY CONSUMPTION
P – 3	Magdalena Lebiocka, Jerzy Montusiewicz, Agnieszka Montusiewicz, Aleksandra Szaja EVALUATING HYDRODYNAMIC CAVITATION FOR INCREASE OF BIODEGRADABILITY OF HERBAL WASTE: A MULTI-CRITERIA APPROACH
P – 4	Małgorzata Iwanek FEM-BASED ANALYSIS OF SOIL SUFFOSION TRIGGERED BY PIPELINE LEAKAGE
P – 5	Olga Orynych, Paweł Ruchała, Wojciech Wawreniuk SEASONAL VARIATIONS OF RENEWABLE ENERGY IN POLAND
P – 6	Kinga Chwaleba, Weronika Wach, Maria Skublewska-Paszkowska, Paweł Powroźnik, Marcin Barszcz LIMITED-RESOURCE GENERALISATION IN FOLK MUSIC RECOGNITION USING MULTIMODAL ADAPTIVE ATTENTION
P – 7	Katarzyna Baran, Kamil Pietrak THCS-VIT: A HYBRID LIGHTWEIGHT VISION TRANSFORMER WITH MULTI-SCALE FEATURE FUSION FOR THERMAL FACIAL EMOTION RECOGNITION
P – 8	Krystian Czajkowski, Maria Skublewska-Paszkowska, Paweł Powroźnik, Marcin Barszcz, Krzysztof Dziedzic, Sylwester Korga TRAINING MACHINE LEARNING AGENT BEHAVIORS IN UNITY: PROXIMAL POLICY OPTIMIZATION VS. SOFT ACTOR-CRITIC ALGORITHMS
P – 9	Jakub Drzał, Daniel Kleczyński, Bartosz Pawłowicz ADAPTIVE TRAFFIC SIGNAL CONTROL WITH A PPO-TRANSFORMER ARCHITECTURE IN COMPLEX TRAFFIC SYSTEMS
P – 10	Łukasz Gierz, Dominik Ryder, Łukasz Warguła, Murat Köklu ADVANCES IN AUTOMATIC SEEDLING DETECTION AND LOCALIZATION USING CNN-BASED COMPUTER VISION FOR PRECISION WEED CONTROL IN PRECISION AGRICULTURE
P – 11	Łukasz Rykała, Arkadiusz Rubiec, Karol Cieślik, Mirosław Przybysz PARAMETER IDENTIFICATION OF A DYNAMIC SYSTEM UNDER RANDOM EXCITATION USING NEURAL NETWORKS
P – 12	Kamil Żelazowski, Wojciech Wojciechewicz, Maria Skublewska-Paszkowska, Paweł Powroźnik AUTOMATIC METHODS FOR 3D MOTION TRAJECTORIES GAP FILLING: CUSTOM-BASED KALMAN VS. BILSTM
P – 13	Michał Cajzner, Leszek Łatka APPLICATION OF IMAGE ANALYSIS FOR THE ASSESSMENT OF CAVITATION EROSION PHENOMENA FOR THE THERMAL SPRAYED COATINGS
P – 14	Krzysztof Dziedzic CUSTOM RECURRENT-BASED FRICTION PREDICTION IN A WEAR-RESISTANT HARDFACING ALLOY

P – 15	Aleksandra Świadek, Łukasz Warguła, Weronika Wiatrowska, Bartosz Wieczorek REVIEW OF THE USE OF EMG SIGNALS IN ENGINE CONTROL SYSTEMS FOR ENERGY EFFICIENCY IMPROVEMENT
P – 16	Aleksandra Świadek, Łukasz Warguła, Weronika Wiatrowska, Jarosław Gabryelski, Bartosz Wieczorek FEASIBILITY STUDY OF SEMG-BASED CONTROL SIGNAL ACQUISITION FOR ENERGY-EFFICIENT ADAPTIVE CONTROL OF AN INTERNAL COMBUSTION ENGINE-POWERED WOOD CHIPPER
P – 17	Beata Tyszkiewicz, Anastasiia Tarnavska, Barbara Buraczyńska PASSWORD SECURITY AMONG INTERNET USERS: AN ANALYSIS OF KNOWLEDGE, ATTITUDES, AND PRACTICES
P – 18	Joanna Szulżyk-Cieplak, Barbara Buraczyńska, Bogdan Basisty IMPACT OF WEBSITE INTERACTIVITY AND PERFORMANCE ON USER EXPERIENCE: AN ANALYSIS OF SELECTED WEBSITES
P – 19	Michał Cioch, Arkadiusz Gola ANALYSIS OF FACTORS AFFECTING PRODUCT PRICE MARGINS IN THE DISTRIBUTION CHAIN
P – 20	Julia Stępień, Imed El Fray DETECTION OF ATTACKS ON COMPUTER NETWORKS USING MACHINE LEARNING - PREDICTIVE MODEL
P – 21	Bartłomiej Chmielewski, Ireneusz Mrozek, Andrzej Chmielewski ADAPTIVE NEIGHBORHOOD SELECTION IN TOLERANT V-DETECTOR FOR ANOMALY AND INTRUSION DETECTION
P – 22	Hubert Stadnik, Piotr Szpyra EXPERIMENTAL INVESTIGATION OF USING A LINEAR ARRAY OF PIEZOELECTRIC SENSORS TO DETERMINE THE LOCATION OF A MECHANICAL IMPACT ON THE SURFACE OF A LAMINATE
P – 23	Edyta Wojtaś MONITORING STORM SEWER DISCHARGES AND ASSESSING THE QUALITY OF RECEIVING WATERS USING MULTI-PARAMETER AND ELECTROCHEMICAL PROBES
P – 24	Michał Staniszewski, Aleksandra Kozłowska, Roman Babko, Grzegorz Łagód RECOGNIZING TESTACEA USING AUTOMATIC IMAGE ANALYSIS ALGORITHMS – EUGLYPHA AS AN EXAMPLE
P – 25	Justyna Kujawska, Monika Kulisz FORECASTING CO ₂ EMISSIONS FROM SOILS AMENDED WITH SEWAGE SLUDGE BIOCHAR USING ARTIFICIAL NEURAL NETWORKS
10.00-10.15	Summary and conference closure
11.00–15.00	The sightseeing tour
15.00–16.00	Lunch break
16.30	Departure to Lublin via conference bus