MANUFACTURING

Day 1, May 14 (Tuesday)

Time	Event	Room/Info
10:00-14:00	Registration + Morning Coffee and Snacks	Hall 1st floor
11:00-13:00	Opening Ceremony, Best Paper Awards, Keynote Speakers	CW7
13:00-13:05	Group Photo	Stairs at the back of the CW
13:05-14:00	Lunch	053
14:00-15:30	Campus & Labs Walking Tour	Start point: in front of the CW
15:30-17:00	Science & Industry & Business Discussion Panel + Coffee	053
18:30-21:00	Ice Breaker Party	MK Bowling, MM Gallery

Day 2, May 15 (Wednesday)

Time	Event		Room/Info
09:00-10:30	Morning Coffee and Snacks		053
09:00-10:30	**Poster Session**		Hall
10:30-11:00	Coffee Break		053
11:00-12:30	**Session 1.1**	**Session 1.2**	CW7 / CW8
12:30-13:30	Lunch		053
13:30-15:00	**Session 2.1**	**Session 2.2**	CW7 / CW8
15:00-15:30	Coffee Break		053
15:30-17:00	**Session 3.1**	**Session 3.2**	CW7 / CW8
18:30-23:00	Gala Dinner		053

Day 3, May 16 (Thursday)

Time	Event		Room/Info
08:30-9:00	Morning Coffee and Snacks		053
09:00-10:30	**Session 4.1**	**Session 4.2**	CW7 / CW8
10:30-11:00	Coffee Break		053
11:00-12:30	**Session 5.1**	**Session 5.2**	CW7 / CW8
12:30-13:30	Lunch		053
13:30-15:00	**Session 6.1**	**Session 6.2**	CW7 / CW8
15:00-16:00	Coffee Break		053
15:00-16:00	Closing Remarks, Best Poster & Presentation Awards Ceremony		053

14-16 May 2024

Day 2, May 15 (Wednesday)

Session 1.1

Time 11:00-12:30 | Chair: Jozef Husár

Authors	Title
Karolina Wrześniowska, Cezary Grabowik	Consumer Awareness and Customization of Footwear in the Context of the Idea of Industry 4.0: Analysis of Survey Results
Manuel F. Suárez-Barraza, Jesús A. Chávez-Pineda, Dailin A. Ramirez Altamirano, María Isabel Huerta-Carvajal	The impact of KAIZEN on the operational performance of multinational manufacturing companies through the degree of maturity. A mixed study in Mexico
Manuel F. Suárez-Barraza, José Ángel Miguel-Davila, María Isabel Huerta-Carvajal	Applying Kaizen (Incremental Innovation) in a Mexican Handcrafted Talavera Company: a case study approach
Adam Olszewski, Paulina Kosmela, Aleksandra Ławniczak, Łukasz Piszczyk	New strategy for limiting environmental impact of catalyst-free polyurethane-wood composites (PU-WC)
Maciej Kaczor, Anna Timofiejczuk and Marcin Januszka	Application of load balancing methods to optimize the production of truck components
Alejandra Avila, César Pinzón-Acosta	Comparative Analysis of VGGish and YAMNet Models for Welding Defect Detection

Session 1.2

Time 11:00-12:30 | Chair: Anna Burduk

Authors	Title
Jacek Diakun	Quantitative Assessment of Product Recycling Properties Using Recycling Product Model
Fernando Gonzalez-Aleu, Valeria Carrizales-Ramirez, Mauricio Ramirez-Guajardo, Zayra Araceli Bazaldua-Martínez, Julio Cesar Iriarte-de Luna	Scrum Applications Outside Information Technology Industry: A Systematic Literature Review and Future Agenda
Vlad Vizitiu, Raul Henning, Mihai Dragomir	Managing Pandemics in Airport Security Environ-ments: A Comparative Analysis of Classic Airport Security and Smart Security Approaches
Aleksander Hejna, Mateusz Barczewski, Joanna Aniśko, Adam Piasecki, Paulina Kosmela	Upcycling furniture polyurethane foam wastes
Mateusz Barczewski, Joanna Aniśko, Joanna Szulc, Paulina Kosmela, Wiktoria Kanciak, Aleksander Hejna, Zaida Ortega	Comparative studies of the technological-structural relationship of rotomolded composites filled with waste functional fillers based on pistachio, walnut, and pecan shells
Tomasz Górny	Strenght calculations of thin-walled members according to international standards: limitation and reimplementation – literature review

Day 2, May 15 (Wednesday)

Session 2.1

Time 13:30-15:00	Chair: Marek Szostak
Authors	**Title**
Tomasz Olszewski, Danuta Matykiewicz	The influence of injection parameters on the thermomechanical properties of a polyamide product
Krzysztof Ciecieląg, Agnieszka Skoczylas, Jakub Matuszak	Recurrence analysis and feed force in drilling of polymer composites
Francisco Romero, Paula Douglas, Bronagh Millar, Zaida Ortega	Assessment of welded ignimbrite waste dust as a filler in rotomolded products: rheological and thermomechanical behavior of PP/ignimbrite composites
Sandra Paszkiewicz, Elżbieta Piesowicz, Konrad Walkowiak and Izabela Irska	Structure-property relationship in poly(hexamethylene 2,5-furandicarboxylate)-block-poly(tetramethylene oxide) copolymers with different flexible segment length
Aminul Islam, Bin Wang	Possibilities and challenges for Tomographic Volumetric 3D printing
Paulina Jakubowska, Arkadiusz Kloziński, Stanisław Kuciel, Robert Przekop	Green high density polyethylene composites with Opoka - hybrid natural filler

Session 2.2

Time 13:30-15:00	Chair: Paulina Rewers
Authors	**Title**
Patrycja Guzanek, Piotr Bawoł, Grzegorz Sobecki	Assessment of the Functioning of Supply Chain Logistics in a Manufacturing Company from the Suppliers' Perspective
Joaquin Ordieres-Meré, Ahmad Rahabi, Daniel Falkowski, Nikolaos Matskanis, Jens Brandenburger, Carlos García-Castellano Gerbolés	Smart Workflows for Advanced Quality Assessment in Steel Industry: Benefits of I5.0
Ali Asghar Bataleblu, Erwin Rauch, David S. Cochran, Dominik T. Matt	Impact of European Sustainability Reporting Standards Guidelines on the Design of Sustainable Factories and Manufacturing Systems
Elahe Atarisharghi, Ali Asghar Bataleblu, Asja Emer, Michaela Golser, Erwin Rauch, Dominik T. Matt	Application of Life Cycle Assessment (LCA) in the Fast-Moving Consumer Goods Sector
Joanna Oleśków-Szłapka, Adnan Corum, Patrycja Hoffa-Dąbrowska, Agnieszka Stachowiak	Remanufacturing Electric Mobility: Challenges and Opportunities in Designing Circular Business Models
Łukasz Marchewka, Marek Grudziński	Preliminary testing of the accuracy of a 3D scanning tool and validation of its calibration procedures

Day 2, May 15 (Wednesday)

Session 3.1

Time 15:30-17:00	Chair: Izabela Rojek
Authors	**Title**
Joaquin Ordieres-Meré, Miguel Ángel Ortega-Mier	Challenges in Industry 5.0: Human Behavior Integration
Ankidim Zinveli, Mihai Dragomir	Risk Assessment in Collaborative Tasks: a Comparative Analysis - Qualitative Method and Quantitative Method
Damjan Maletič, Vladimir Todorović, Matjaž Maletič	A Study into the Critical Success Factors of an Asset Management System Implementation: a Review and Evaluation
Adam Górny	Guidelines and Needs for the Implementation of the ISO 45001 Requirements for Shaping of Safety in Industry 4.0
Alla Polyanska, Yuliya Pazynich, Zhanna Poplavska, Yuri Kashchenko, Vladyslaw Psiuk, Volodymyr Martynets	Conditions of Remote Work to Ensure Mobility in Project Activity
Mosè Gallo	An Artificial Neural Networks framework for improving inventory management decisions

Session 3.2

Time 15:30-17:00	Chair: Magdalena Żukowska
Authors	**Title**
Fernando Gonzalez-Aleu, Ivana Alexandra Saucedo-Gonzalez, Luis Jauregui-Sanchez, Sofía Villarreal-Garza, Mariana Dingles-Villarreal	Continuous Improvement Programs: Before and After the COVID-19 Pandemic
Dario Antonelli, Alessia Marina, Dorota Stadnicka, Paweł Litwin	Objective and Subjective Factors Affecting Neurodiverse Inclusion in Manufacturing
Berna Ulutas, Busra Nur Yetkin	A Human-Robot Collaboration Workstation Design to Assess Worker Physical Workload with JACK Software
Krzysztof Kotecki, Anna Napierała, Michał Rychlik	Automation of the determining parameters process used to assess the state of hip joint degeneration based on CT imaging
Zuzanna Bandosz, Michał Rychlik	Design and Finite Element Analysis of a custom wrist orthosis for 3D printing containing ventilation areas and wrist protection zones achieved by topological optimization
Filip Górski, Jakub Gapsa, Aleksandra Kupaj, Wiesław Kuczko, Magdalena Żukowska, Przemysław Zawadzki	Virtual Design Process of Customized 3D Printed Modular Upper Limb Prostheses

Day 3, May 16 (Thursday)

Session 4.1

Time 09:00-10:30	Chair: Marta Grabowska
Authors	**Title**
Marek Fertsch, Agnieszka Stachowiak, Joanna Oleśków-Szłapka	Innovations – changes in the environment of the production planning process in enterprises
Wojciech Danilczuk, Arkadiusz Gola, Jakub Pizoń	Heuristic-Based Algorithm for Suboptimal Scheduling Realized in Hybrid Production Environment
Carmen Vilanova de Diego, Miguel Ortega-Mier, Tamara Borreguero, Álvaro García-Sánchez, Carlos García-Castellano Gerbolés	Comparison of different production systems approaches of a manufacturing line in the aeronautical sector
Hector Quintero, Elisa Elizabeth Mendieta, César Pinzón-Acosta	Identyfying an image classification model for welding defects detection
Eryk Szwarc, Paulina Golińska-Dawson, Grzegorz Bocewicz, Zbigniew Banaszak	Proactive resource maintenance in Product-as-a-Service business models: a constraints programming based approach for MFP offerings prototyping
Erfan Babaee Tirkolaee, Selma Gütmen, Gerhard-Wilhelm Weber	A robust-reliable aggregate production planning problem considering operations failure under uncertainty

Session 4.2

Time 09:00-10:30	Chair: Bartosz Gapiński
Authors	**Title**
Lennart Grüger, Tim Sebastian Fischer, Ralf Woll	Investigation of the Wire Arc Direct Energy Deposition-Process and Possible Interactions
Andreea Istrate	Contributions regarding parametrized design
Pramodkumar S Kataraki, Aulia Ishak, M. Mazlan, Isam Qasem, Ahmed A. Hussien, Ahmad Faiz Zubair, Ayub Ahmed Janvekar	Prediction of Cutting Forces for Machine Tools by Neural Networks
Aleksander Gardocki	Manufacturing multipole magnetic rings for encoders using the injection molding method with premagnetization
Kamila Sałasińska	Newly bio-based fire retardant systems for polymers
Dominik Rybarczyk, Daniel Wyrwał, Tymoteusz Lindner	Construction of an electronic safety system in a ladder

Day 3, May 16 (Thursday)

Session 5.1

Time 11:00-12:30	Chair: Sebastian Skoczypiec
Authors	**Title**
Agnieszka Skoczylas, Jakub Matuszak, Krzysztof Ciecieląg, Kazimierz Zaleski	Analysis of selected surface layer properties after ball burnishing of samples cut with a laser parallel and perpendicular to the rolling direction
Florin Popister, Horea-Stefan Goia, Paul Ciudin	Development of an educational Cobot structure
Berna Ulutas, Georgios Ioannou, Stefan Bracke	Assessing the Effectiveness and Efficiency of Selected Solution Approaches for Two-Dimensional Stock Cutting Problems (Part I): Case Study Printed Circuit Boards
Marcin Grabowski, Emilia Franczyk, Marcin Małek, Sebastian Skoczypiec	Primary research on dry milling of AISI 316L stainless steel using coated monolithic carbide tools
Igor Cudnik, Jacek Andrzejewski	Preparation and evaluation of the properties of FDM printed materials made from waste-origin polymers
Danuta Matykiewicz, Oliwia Sienkiewicz	Lightweight sandwich epoxy composites reinforced with a 3D polyamide printed core

Session 5.2

Time 11:00-12:30	Chair: Justyna Trojanowska
Authors	**Title**
Rehan Khan, Michał Wieczorowski, Ariba Qureshi, Muhammad Ammar, Tauseef Ahmed, Umair Khan	Recent Trends in Artificial Intelligence and Machine Learning Methods Applied to Water Jet Machining
Jan Dąbrowski, Tomasz Bartkowiak, Piotr Wierzchowski, Dariusz Dąbrowski	Manufacturing line-level root cause analysis and bottleneck detection using the digital shadow concept and cloud computing
Erwin Rauch, Ali Asghar Bataleblu, Michaela Golser, Asja Emer, Dominik T. Matt	Potential of Graph Database Visualization of the Supplier Network to Increase Resilience in Multi-Tier Supply Chains
Ankur Krishna, Rajesh Duraisamy	Geometric Complexity Evaluation Method for Adoption of Additive Manufacturing
Diana Dragomir, Florin Popișter, Kamil Erkan Kabak	Using AI tools to enhance the risk management process in the automotive industry

Day 3, May 16 (Thursday)

Session 6.1

Time 13:30-15:00	Chair: Stanisław Legutko
Authors	**Title**
Sławomir Nadolny, Michał Rogalewicz	Transition of controlled atmosphere brazing jig for aluminum heat exchangers from spring-loaded to fixed-dimension
Rosario-del-Pilar López Padilla, Margarita-Jesús Egúsquiza Rodriguez, Jaime-Enrique Molina Vilchez	Six sigma for the improvement of productivity for fiber to the home (FTTH) installations of an outsourcing service company
Paul Ciudin, Horea Ștefan Goia, Florin Popișter	Implementation of human gestures in the control of collaborative robots
Marcin Hinz, Alexander Lindworsky, Stefan Bracke	Qualification of AI-based surface topography inspection systems for inline measurement in series production: Tactile touch systems versus optical AI analysis
Ryszard Ziętek, Paweł Herbin, Mirosław Pajor	Prediction of skeletal muscle torque using electromyographic signals, based on artificial neural networks
Vladyslav Kondus, Ivan Pavlenko, Ján Piteľ, Oleksandr Kulikov, Volodymyr Rybalchenko, Vitalii Ivanov, Olaf Ciszak	Improvement of the Sewage System for the Nuclear Power Plant WWER-1000 Reactor

Session 6.2

Time 13:30-15:00	Chair: Filip Górski
Authors	**Title**
Mateusz Danioł, Daria Hemmerling, Marek Wodziński	AI-based Automated Custom Cranial Implant Design – Challenges and Opportunities with Case Study
Grzegorz Adamek, Jeremiasz Koper, Michał Pilch, Jarosław Jakubowicz	Ti Implant Surface State After Micro-Arc Oxidation Process
Răzvan Păcurar, Diana Negrea, Emilia Sabău, Dan Sorin Comşa, Cristina Borzan, Nikola Vitkovic, Justyna Rybarczyk, Ancuţa Păcurar	Research on Mechanical Characteristics of 3D-Printed PEEK Material-Based Lattice Structures for Vertebral Implants
Răzvan Păcurar, Gania Consuella, Emilia Sabău, Dan Sorin Comşa, Cristina Borzan, Nikola Vitkovic, Sven Maricic, Stanislaw Legutko, Ancuţa Păcurar	Research on Design and Manufacturing of PEKK-Based Mandibular Implants by Fused Deposition Modeling
Magdalena Żukowska, Filip Górski, Radosław Wichniarek, Wiesław Kuczko, Agata Buczkowska-Andruszko, Jacek Banaszewski	Assessment of the usefulness of additively manufactured anatomical models in the process of preoperative support and education
Răzvan Păcurar, Gabriela Friciu, Emilia Sabău, Cristian Vilău, Eugen Guţiu, Ovidiu Nemeş, Nikola Vitkovic, Remigiusz Łabudzki, Ancuţa Păcurar	Research on Design and Manufacturing of Pelvic Bone Structure by Fused Deposition Modeling Method

MANUFACTURING

Day 2, May 15 (Wednesday)

Poster Session

	Time 09:00-10:30	Chair: Michał Jakubowicz
No	Authors	Title
1.	Mariusz Salwin, Andrzej Kraslawski, Michał Andrzejewski, Magdalena Hryniewicka	Product-Service System Design - A case study for Parking Furniture Industry
2.	Johan Rojas, Karen Carranza, María de los Ángeles Campos	The medical device industry in a Kaizen environment in the year 2050 Costa Rica Case Study
3.	Luis Suárez, Aoife Ní Mhuirí, Bronagh Millar, Mark McCourt, Eoin Cunningham, Zaida Ortega	Recyclability Assessment of Lignocellulosic Fiber Composites: Reprocessing of Giant reed/HDPE Composites by Compression Molding
4.	Oleg Krol, Vladimir Sokolov, Oleksandr Logunov	Technological Innovations in the Design of Worm Gears for Tool Magazine of Multioperational Machine
5.	Karol Goryl, Martin Pollák, Marek Kočiško, Martin Koroľ	Comparison of PLA and PLA Carbon Fiber materials on tensile test
6.	Bartłomiej Krawczyk, Piotr Szablewski, Bartosz Gapiński, Michał Wieczorowski	Assessment of threads used in the aviation industry based on the microstructure analysis
7.	Izabela Rojek, Dariusz Mikołajewski, Sławomir Przybyliński, Ewa Dostatni, Alžbeta Sapietová	Toward ML-based application for vehicles operation cost management
8.	Anna Borucka, Krzysztof Patrejko, Łukasz Patrejko, Polakowski Konrad	Optimization and evaluation of storage processes based on a selected example
9.	Anna Borucka, Łukasz Patrejko, Krzysztof Patrejko, Julia Lipińska	Selected Methods for Improving the Quality of Production Processes
10	Anna Karwasz, Igor Wawrzynowicz	Using visions systems and manipulators in Industry 4.0
11	Michał Jakubowicz, Patryk Mietliński, Jolanta Królczyk, Grzegorz Budzik, Piotr Niesłony, Anna Trych-Wildner, Natalia Wojciechowska, Grzegorz Królczyk, Michał Wieczorowski, Julia Staśkiewicz, Tomasz Bartkowiak	Parametric evaluation samples made by SLM technology measured using micro-computed tomography
12	Krzysztof Smak, Piotr Szablewski, Stanisław Legutko	Evaluation of the tool set overhang effect on surface topography in the finish turning process of Inconel 718 alloy
13	Andrzej Loska, Waldemar Paszkowski, Robert Waszkowski	The scenario approach to the concept of maintenance of technical systems of urban engineering
14	Waldemar Paszkowski, Andrzej Loska, Robert Waszkowski	A method for developing acoustic maps for noise management in terms of the SmartCity concept
15	Emilia Campean, Claudiu Adrian Serban, Mihai Ciupan, Grigore Pop	Detecting Motor Defects Using Noise Analysis
16	Krzysztof Łukaszewski, Paweł Buń, Anna Karwasz	Comparison of Monorail Vehicle Dynamic Behavior in Unity and Universal Mechanism
17	Martin Koroľ, Jozef Török, Karol Goryl, Adrián Vodilka	Research of selected TPMS structures made of ABS and Nylon 12 CF material using the FDM7

18	Sara Díaz, Zaida Ortega, Raúl Ríos	Characterization of microalgae biomass/PE biocomposites obtained by compression and rotational molding
19	Sławomir Kłos, Justyna Patalas-Maliszewska	Throughput Evaluation of Serial-Parallel Manufacturing Systems for Different Production Flow Strategies
20	Agnieszka Terelak-Tymczyna, Eliza Jarysz-Kamińska, Emilia Bachtiak-Radka	The Application of the Modified QFD Method for Assessing and Selecting Suppliers in a Company
21	Reggie Davidrajuh, Damian Krenczyk, Bożena Skołud	Minimum Job Completion Time in Petri Nets
22	Dalibor Jeřábek	Storage and Production of Hydrogen with Special Focus on Membraneless Electrolysis
23	Katarzyna Piotrowska, Izabela Piasecka, Arkadiusz Gola, Ewelina Kosicka	Assessment of the Impact of Selected Segments of Road Transport on the Natural Environment using LCA Analysis
24	Adrian Popescu, Catalin Moldovan, Emilia Campean, Grigore Pop	The Design of an Injection Mould for the "ENGINE BUFFER" Benchmark – Case Study
25	Justyna Patalas-Maliszewska, Hanna Łosyk, Ewa Dostatni, Sławomir Kłos	IoT-based Monitoring the Level of Sustainable Production: a Case of Energy Consumption in Turning Process
26	Daniel Černý, Jiří Kuchař, Henryk Kania, Mariola Saternus	Verification of the Properties of Zinc Hot-dip Galvanized Steel Samples
27	Elżbieta Krawczyk-Dembicka, Wiesław Urban	Cooperation between companies in technology management really matters – explored through PLS-SEM modelling
28	Wiktoria Kanciak, Dorota Czarnecka-Komorowska, Cezary Jędryczka, Dariusz Sędziak	The drum electrostatic separator application in the pol-ymers waste recycling based on end-of-life vehicles to composites manufacture
29	Agnieszka Terelak-Tymczyna, Beata Niesterowicz	Lean Manufacturing in digital transformation of manufacture
30	Jozef Török, Adrián Vodilka, Jakub Kaščak, Marek Kočiško	Design of personalized orthoses with support of PTC Creo and FDM technology
31	Nikol Bachurová, Jan Kudláček, Stanisław Legutko	Effect of material and pretreatments on surface cleanliness
32	Olexandr Prykhodko, Yuliia Denysenko, Oksana Dynnyk	Methodology for Developing a Quality Management System for Cylinder Sleeves Manufacturing
33	Krzysztof Santarek	Modern technologies supporting the development of the automotive industry
34	Alejandra Avila, César Pinzón-Acosta	Comparative Analysis of VGGish and YAMNet Models for Welding Defect Detection
35	Filip Górski, Agnieszka Marciniak, Radosław Wichniarek, Wiesław Kuczko, Magdalena Żukowska, Justyna Rybarczyk	Development of 3D printed low-cost individualized actuated upper limb prostheses
36	Mariusz Piechowski, Ryszard Wyczółkowski, Waldemar Paszkowski	The Concept of a System Supporting the Implementation of an Intelligent Lubrication Strategy within the Company Using Advanced Information Technologies
37	Michał Wieczorowski, Bartosz Gapiński, Michał Jakubowicz, Dawid Kucharski, Karol Grochalski, Natalia Swojak, Lidia Marciniak-Podsadna, Maria	Influence of selected measurement conditions on the reliability of the representation of ring and rim features

	Kuznowicz, Aleksandra Krawczyk, Jerzy A. Sładek, Rehan Khan	
38	Magdalena Dąbrowska, Daniel Medyński, Dagmara Łapczyńska, Anna Burduk, Oleh Pihnastyi	Assessment of Risk and Production Losses Based on a Selected Carpentry Company
39	Anna Dudkowiak, Ewa Dostatni, Alicja Czerw	Comparison of environmental analysis results from two IT tools based on an additive manufactured prosthesis
40	Wiktoria Czernecka, Marcin Butlewski	Success factor driven adaptive approach to pro-ergonomic project management
41	Jakub Kaščak, Marek Kočiško, Jozef Török, Adrián Vodilka	3D printing in non-planar layers as a new tool for increasing the quality of FDM production
42	Khrystyna Berladir, Tetiana Hovorun, Justyna Trojanowska, Vitalii Ivanov, Angelina Iakovets	Failure Analytics of Defects in Mechanical Engineering Parts Using Root Cause Analysis: Case Study
43	Adeniyi Sobowale, Helena Lopes, Justyna Trojanowska, Ana Lima, Pedro Marujo, Jose Machado	Exploring the Potential of Digital Twins for New Product Design and Development: A Review of Research Gaps
44	Hugo Silva, André S. Santos, Leonilde R. Varela, Justyna Trojanowska, Vitalii Ivanov	Virtual and Augmented Reality: past, present, and future
45	Hugo Silva, André S. Santos, Leonilde R. Varela, Magdalena Diering, Khrystyna Berladir	A Racing Approach: The Evolution of Racing Techniques, a Systematic Literature Review
46	Łukasz Łampika, Dagmara Łapczyńska, Joanna Kochańska, Anna Burduk, Kamil Musiał	Ensuring the stability of production processes using statistical models
47	Jozef Husár, Stella Hrehová, Lucia Knapčíková, Piotr Trojanowski	Mixed Reality as a Perspective Education Tool in Industry 5.0
48	Sławomir Cieślak, Przemysław Zawadzki, Jakub Gapsa	Digital twin application for vision control in the production of mechatronic ladders
49	Jakub Matuszak, Krzysztof Ciecieląg, Agnieszka Skoczylas, Kazimierz Zaleski	The influence of shot peening and brushing on the deburring effectiveness and surface layer properties of 1.0503 steel
50	Agnieszka Kujawińska, Magdalena Diering, Anna Przybył	Machine Vision System for Quality Control of Stents Used in Angioplasty
51	Oliwia Krüger, Marta Grabowska	Improving the Student Engineer Educational Process by Teaching Economic Efficiency Calculations
52	Lucia Knapčíková, Annamária Behúnová, Rebeka Tauberová, Matúš Martiček, Jozef Husár	Innovation of the Manufacturing Company by Using of Digitization Tools
53	Krzysztof Karbowski, Bartosz Kopiczak,Konrad Nering, Ziemowit Malecha, Robert Chrzan, Jolanta Gawlik, Aleksandra Sucherska, Joanna Szaleniec	Reverse engineering and computational fluid dynamics in otolaryngology
54	Jarosław Korpysa, Józef Kuczmaszewski, Ireneusz Zagórski	Dimensional accuracy of AZ91D magnesium alloy components after precision milling
55	Paweł Pieśko, Magdalena Zawada-Michałowska	Effect of machining parameters and end mill geometry on chip formation and machined surface quality
56	Magdalena Zawada-Michałowska, Paweł Pieśko	Effect of anisotropy on the machinability of an aluminium alloy component
57	Ewelina Kosicka, Aneta Krzyzak, Edward Kozłowski , Robert Szczepaniak	Optimization of the Composition of Selected Polymer Composites with Physical Modifiers

58	Lijo Paul, Pradeep P V	Investigation on Anterior Cruciate Ligament with SLA 3D printing
59	Elżbieta Piesowicz, Sandra Paszkiewicz, Izabela Irska, Konrad Walkowiak, Monika Rzonsowska, Beata Dudziec, Mateusz Barczewski	Influence of the tetrafunctional double-decker silsesquioxane (DDSQ-eter-4OH) on the properties of compatibilized PLA/ENR thermoplastic vulcanizates
60	Dariusz Afelt, Kinga Mencel, Paweł Brzęk, Marek Szostak	Anti-burglary Passive Telecommunication Cabinets Produced from Polymeric Material
61	Joanna Aniśko, Luis Suárez, Zaida Ortega, Mateusz Barczewski	Valorization of invasive plant Solidago canadensis into a functional filler for polyethylene composites with improved thermo-oxidative stability
62	Magdalena Diering, Agnieszka Kujawińska, Artur Meller, Jędrzej Iglewski, Krzysztof Żywicki, Adam Hamrol, Marcin Suszyński, Marta Grabowska, Justyna Trojanowska, Paulina Rewers	Assessment of the quality of the manufacturing process in digital representation of the water meter body production
63	Damian Dziadowiec, Piotr Szymczak	CrystaLid – high barrier retortable monofilm for food packaging
64	Damian Dziadowiec, Piotr Szymczak	Recyclable barrier APET film with sealing properties
65	Magdalena Niemczewska-Wójcik	The multi-scale analysis of surface topography created in electrical discharge machining
66	Krzysztof Żywicki, Magdalena Diering, Agnieszka Kujawińska, Jędrzej Iglewski, Przemysław Łuczak	Digital Twin concept in production process control
67	Michał Jakubowicz, Adam Gąska, Angelika Jarocha, Małgorzata Kujawińska, Tomasz Kowaluk, Krzysztof Stępień, Adam Wójtowicz, Mariusz Wiśniewski, Bartosz Gapiński, Natalia Swojak, Maria Kuznowicz, Michał Wieczorowski	Uncertainty determination method for measurements performed using hybrid measurement systems
68	Marcin Moskwa, Michał Jakubowicz, Bartosz Gapiński	Challenges in controlling radial force variation of tyres
69	Lidia Smyczyńska, Michał Wieczorowski, Bartosz Gapiński	Problems of diameter and form deviation measurement of incomplete round profile
70	Bartosz Gapiński, Michał Wieczorowski, Rafał Reizer, Kazimiera Dudek, Grzegorz M. Królczyk, Piotr Niesłony, Andrzej Dzierwa, Paweł Pawlus	Possibilities of measuring topography on micro-CT
71	Krzysztof Kalinowski, Damian Krenczyk	Application of scheduling techniques in the design of the assembly line supplying subsystem
72	Paulina Kosmela, Wiktoria Żukowska, Mariusz Marć, Joanna Aniśko, Aleksander Hejna, Mateusz Barczewski	Determination of changes in the structure and thermal stability of waste biomass as potential fillers of polymer composites formed by rotational molding
73	Paula Kolbusz, Katarzyna Antosz	The implementation of machine learning methods in Six Sigma projects – a literature review
74	Jan Duda, Sylwester Oleszek, Krzysztof Santarek	The Impact of PLM Systems on the Digital Transformation of Manufacturing Companies