

Szymon Wojciechowski

List of Publications by Year in descending order

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69
papers

2,655
citations

159358

30
h-index

197535

49
g-index

69
all docs

69
docs citations

69
times ranked

1541
citing authors

#	ARTICLE	IF	CITATIONS
1	Improvement of machinability of Ti and its alloys using cooling-lubrication techniques: a review and future prospect. <i>Journal of Materials Research and Technology</i> , 2021, 11, 719-753.	2.6	154
2	Parametric and nonparametric description of the surface topography in the dry and MQCL cutting conditions. <i>Measurement: Journal of the International Measurement Confederation</i> , 2018, 121, 225-239.	2.5	131
3	The influence of the cooling conditions on the cutting tool wear and the chip formation mechanism. <i>Journal of Manufacturing Processes</i> , 2016, 24, 107-115.	2.8	130
4	Dry cutting effect in turning of a duplex stainless steel as a key factor in clean production. <i>Journal of Cleaner Production</i> , 2017, 142, 3343-3354.	4.6	122
5	Application of signal to noise ratio and grey relational analysis to minimize forces and vibrations during precise ball end milling. <i>Precision Engineering</i> , 2018, 51, 582-596.	1.8	118
6	Study on metrological relations between instant tool displacements and surface roughness during precise ball end milling. <i>Measurement: Journal of the International Measurement Confederation</i> , 2018, 129, 686-694.	2.5	95
7	Evaluation of turning with different cooling-lubricating techniques in terms of surface integrity and tribologic properties. <i>Tribology International</i> , 2020, 148, 106334.	3.0	92
8	Artificial intelligence systems for tool condition monitoring in machining: analysis and critical review. <i>Journal of Intelligent Manufacturing</i> , 2023, 34, 2079-2121.	4.4	90
9	The estimation of cutting forces and specific force coefficients during finishing ball end milling of inclined surfaces. <i>International Journal of Machine Tools and Manufacture</i> , 2015, 89, 110-123.	6.2	79
10	Investigation on the edge forces in ball end milling of inclined surfaces. <i>International Journal of Mechanical Sciences</i> , 2016, 119, 360-369.	3.6	78
11	Structural and Microhardness Changes After Turning of the AISI 1045 Steel for Minimum Quantity Cooling Lubrication. <i>Journal of Materials Engineering and Performance</i> , 2017, 26, 431-438.	1.2	77
12	Mechanical and technological aspects of micro ball end milling with various tool inclinations. <i>International Journal of Mechanical Sciences</i> , 2017, 134, 424-435.	3.6	75
13	Effects of extreme pressure and anti-wear additives on surface topography and tool wear during MQCL turning of AISI 1045 steel. <i>Journal of Mechanical Science and Technology</i> , 2018, 32, 1585-1591.	0.7	75
14	Precision surface characterization for finish cylindrical milling with dynamic tool displacements model. <i>Precision Engineering</i> , 2016, 46, 158-165.	1.8	72
15	Resource saving by optimization and machining environments for sustainable manufacturing: A review and future prospects. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 166, 112660.	8.2	68
16	Formation of surface layer in metal matrix composite A359/20SiCP during laser assisted turning. <i>Composites Part A: Applied Science and Manufacturing</i> , 2016, 91, 370-379.	3.8	66
17	Effect of the Relative Position of the Face Milling Tool towards the Workpiece on Machined Surface Roughness and Milling Dynamics. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 842.	1.3	62
18	Intelligent Optimization of Hard-Turning Parameters Using Evolutionary Algorithms for Smart Manufacturing. <i>Materials</i> , 2019, 12, 879.	1.3	62

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19	The study on minimum uncut chip thickness and cutting forces during laser-assisted turning of WC/NiCr clad layers. <i>International Journal of Advanced Manufacturing Technology</i> , 2017, 91, 3887-3898.	1.5	58
20	SURFACE TEXTURE ANALYSIS AFTER BALL END MILLING WITH VARIOUS SURFACE INCLINATION OF HARDENED STEEL. <i>Metrology and Measurement Systems</i> , 2014, 21, 145-156.	1.4	56
21	Tool wear, surface roughness, cutting temperature and chips morphology evaluation of Al/TiN coated carbide cutting tools in milling of Cuâ€“Bâ€“CrC based ceramic matrix composites. <i>Journal of Materials Research and Technology</i> , 2022, 16, 1243-1259.	2.6	55
22	Optimization of FFF Process Parameters by Naked Mole-Rat Algorithms with Enhanced Exploration and Exploitation Capabilities. <i>Polymers</i> , 2021, 13, 1702.	2.0	52
23	Experimental investigations and optimization of MWCNTs-mixed WEDM process parameters of nitinol shape memory alloy. <i>Journal of Materials Research and Technology</i> , 2021, 15, 2152-2169.	2.6	46
24	Effect of mixing method and particle size on hardness and compressive strength of aluminium based metal matrix composite prepared through powder metallurgy route. <i>Journal of Materials Research and Technology</i> , 2022, 18, 282-292.	2.6	46
25	Cutting Forces and Vibrations During Ball End Milling of Inclined Surfaces. <i>Procedia CIRP</i> , 2014, 14, 113-118.	1.0	43
26	Tool Life and Process Dynamics in High Speed Ball End Milling of Hardened Steel. <i>Procedia CIRP</i> , 2012, 1, 289-294.	1.0	40
27	Investigation on microstructure, mechanical, and tribological performance of Cu base hybrid composite materials. <i>Journal of Materials Research and Technology</i> , 2021, 15, 6990-7003.	2.6	39
28	Surface roughness analysis of hardened steel after highâ€“speed milling. <i>Scanning</i> , 2011, 33, 386-395.	0.7	35
29	Integration of Fuzzy AHP and Fuzzy TOPSIS Methods for Wire Electric Discharge Machining of Titanium (Ti6Al4V) Alloy Using RSM. <i>Materials</i> , 2021, 14, 7408.	1.3	35
30	Effect of ball-milling process parameters on mechanical properties of Al/Al ₂ O ₃ /collagen powder composite using statistical approach. <i>Journal of Materials Research and Technology</i> , 2021, 15, 2918-2932.	2.6	34
31	Experimental investigation and optimization of compression moulding parameters for MWCNT/glass/kevlar/epoxy composites on mechanical and tribological properties. <i>Journal of Materials Research and Technology</i> , 2021, 15, 327-341.	2.6	32
32	Machined Surface Roughness Including Cutter Displacements in Milling of Hardened Teel. <i>Metrology and Measurement Systems</i> , 2011, 18, .	1.4	31
33	Estimation, optimization and analysis based investigation of the energy consumption in machinability of ceramic-based metal matrix composite materials. <i>Journal of Materials Research and Technology</i> , 2022, 17, 2987-2998.	2.6	31
34	The Evaluation of Surface Integrity During Machining of Inconel 718 with Various Laser Assistance Strategies. <i>MATEC Web of Conferences</i> , 2017, 136, 01006.	0.1	28
35	Experimental investigations and prediction of WEDMed surface of nitinol SMA using SinGAN andÂDenseNet deep learning model. <i>Journal of Materials Research and Technology</i> , 2022, 18, 325-337.	2.6	26
36	Experimental investigation of selective laser melting parameters for higher surface quality and microhardness properties: taguchi and super ranking concept approaches. <i>Journal of Materials Research and Technology</i> , 2021, 14, 2586-2600.	2.6	22

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37	Synthesis and characterization of mechanically alloyed nanostructured ternary titanium based alloy for bio-medical applications. <i>Journal of Materials Research and Technology</i> , 2022, 16, 88-101.	2.6	20
38	In Situ Micro-Observation of Surface Roughness and Fracture Mechanism in Metal Microforming of Thin Copper Sheets with Newly Developed Compact Testing Apparatus. <i>Materials</i> , 2022, 15, 1368.	1.3	20
39	Image Processing of Mg-Al-Sn Alloy Microstructures for Determining Phase Ratios and Grain Size and Correction with Manual Measurement. <i>Materials</i> , 2021, 14, 5095.	1.3	19
40	Experimental investigation on the effect of dry and multi-jet cryogenic cooling on the machinability and hole accuracy of CFRP composites. <i>Journal of Materials Research and Technology</i> , 2022, 18, 1772-1783.	2.6	17
41	Surface texture formation in precision machining of direct laser deposited tungsten carbide. <i>Advances in Manufacturing</i> , 2017, 5, 251-260.	3.2	15
42	The Influence of Tool Wear on the Vibrations During Ball end Milling of Hardened Steel. <i>Procedia CIRP</i> , 2014, 14, 587-592.	1.0	14
43	High-Performance Face Milling of 42CrMo4 Steel: Influence of Entering Angle on the Measured Surface Roughness, Cutting Force and Vibration Amplitude. <i>Materials</i> , 2021, 14, 2196.	1.3	14
44	Experimental investigation on welding of 2.25 Cr-1.0 Mo steel with regulated metal deposition and GMAW technique incorporating metal-cored wires. <i>Journal of Materials Research and Technology</i> , 2021, 15, 1007-1016.	2.6	14
45	Estimation of Minimum Uncut Chip Thickness during Precision and Micro-Machining Processes of Various Materials – A Critical Review. <i>Materials</i> , 2022, 15, 59.	1.3	14
46	Effect of alumina oxide nano-powder on the wear behaviour of CrN coating against cylinder liner using response surface methodology: processing and characterizations. <i>Journal of Materials Research and Technology</i> , 2022, 16, 1102-1113.	2.6	13
47	Study on Technological Effects of a Precise Grooving of AlSi13MgCuNi Alloy with a Novel WCCo/PCD (DDCC) Inserts. <i>Materials</i> , 2020, 13, 2467.	1.3	12
48	Evaluation of Surface Topography after Face Turning of CoCr Alloys Fabricated by Casting and Selective Laser Melting. <i>Materials</i> , 2020, 13, 2448.	1.3	12
49	Advances in Hard-to-Cut Materials: Manufacturing, Properties, Process Mechanics and Evaluation of Surface Integrity. <i>Materials</i> , 2020, 13, 612.	1.3	12
50	Geometric Specification of Non-Circular Pulleys Made with Various Additive Manufacturing Techniques. <i>Materials</i> , 2021, 14, 1682.	1.3	12
51	Productivity Enhancement by Prediction of Liquid Steel Breakout during Continuous Casting Process in Manufacturing of Steel Slabs in Steel Plant Using Artificial Neural Network with Backpropagation Algorithms. <i>Materials</i> , 2022, 15, 670.	1.3	12
52	Investigation of machinability of Ti-B-SiCp reinforced Cu hybrid composites in dry turning. <i>Journal of Materials Research and Technology</i> , 2022, 18, 1474-1487.	2.6	12
53	Corrosion Resistance and Surface Bioactivity of Ti6Al4V Alloy after Finish Turning under Ecological Cutting Conditions. <i>Materials</i> , 2021, 14, 6917.	1.3	11
54	Material independent effectiveness of workpiece vibration in 1/4-EDM drilling. <i>Journal of Materials Research and Technology</i> , 2022, 18, 531-546.	2.6	10

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55	Analysis and Optimization of Dimensional Accuracy and Porosity of High Impact Polystyrene Material Printed by FDM Process: PSO, JAYA, Rao, and Bald Eagle Search Algorithms. <i>Materials</i> , 2021, 14, 7479.	1.3	9
56	Machine Learning Modelling and Feature Engineering in Seismology Experiment. <i>Sensors</i> , 2020, 20, 4228.	2.1	8
57	Application of Generalized Regression Neural Network and Gaussian Process Regression for Modelling Hybrid Micro-Electric Discharge Machining: A Comparative Study. <i>Processes</i> , 2022, 10, 755.	1.3	8
58	On the Microstructure, Microhardness and Wear Behavior of Gray Cast Iron Surface Layer after Laser Strengthening. <i>Materials</i> , 2022, 15, 1075.	1.3	5
59	The application of response surface method to optimization of precision ball end milling. <i>MATEC Web of Conferences</i> , 2017, 112, 01004.	0.1	3
60	Wear of carbide inserts during turning of C45 steel in dry cutting conditions and in presence of emulsion mist. <i>E3S Web of Conferences</i> , 2017, 19, 03009.	0.2	3
61	Analysis of Cutting Force and Power Under the Conditions of Minimized Cooling in the Process of Turning AISI-1045 Steel with the Use of the Parameter Space Investigation Method. <i>Lecture Notes in Mechanical Engineering</i> , 2020, , 151-162.	0.3	3
62	The Influence of EP/AW Addition in the MQL Method on the Parameters of Surface Geometrical Structure in the Process of Turning 316L Steel. <i>Lecture Notes in Mechanical Engineering</i> , 2019, , 341-350.	0.3	2
63	Development of an Oxide Layer on Al 6061 Using Plasma Arc Electrolytic Oxidation in Silicate-Based Electrolyte. <i>Materials</i> , 2022, 15, 1616.	1.3	2
64	Turning process monitoring of internal combustion engine piston's cylindrical surface. <i>MATEC Web of Conferences</i> , 2017, 112, 10002.	0.1	1
65	Hybrid Numerical-Analytical Approach for Force Prediction in End Milling of 42CrMo4 Steel. <i>Lecture Notes in Mechanical Engineering</i> , 2019, , 223-232.	0.3	1
66	The Influence of the Application of EP Additive in the Minimum Quantity Cooling Lubrication Method on the Tool Wear and Surface Roughness in the Process of Turning 316L Steel. <i>Lecture Notes in Mechanical Engineering</i> , 2019, , 254-263.	0.3	1
67	On the effectiveness of Ni alloy-bronze composite lattice structures used in slide bearings operated under heavy loads. <i>Journal of Materials Research and Technology</i> , 2022, 19, 2235-2246.	2.6	1
68	The analysis of instantaneous tool displacements during precise ball end milling. <i>MATEC Web of Conferences</i> , 2017, 137, 05008.	0.1	0
69	The study on dynamic properties of monolithic ball end mills with various slenderness. <i>E3S Web of Conferences</i> , 2017, 19, 03014.	0.2	0