Karali Patra

List of Publications by Year
in descending order

91 papers	1,732 citations	236925 25 h-index	345221 36 g-index
92 all docs	92 docs citations	92 times ranked	1277 citing authors

#	Article	IF	Citations
1	Parametric optimization and process capability analysis for machining of nickel-based superalloy. International Journal of Advanced Manufacturing Technology, 2019, 102, 3995-4009.	3.0	98
2	Artificial neural network based tool condition monitoring in micro mechanical peck drilling using thrust force signals. Precision Engineering, 2017, 48, 279-291.	3.4	77
3	A hybrid modelling approach towards prediction of cutting forces in micro end milling of Ti-6Al-4V titanium alloy. International Journal of Mechanical Sciences, 2019, 150, 495-509.	6.7	62
4	Mechanical micro-texturing of Ti-6Al-4V surfaces for improved wettability and bio-tribological performances. Surface and Coatings Technology, 2018, 349, 71-81.	4.8	61
5	Mechanistic cutting force modelling for micro-drilling of CFRP composite laminates. CIRP Journal of Manufacturing Science and Technology, 2017, 16, 55-63.	4.5	56
6	Artificial neural network based prediction of drill flank wear from motor current signals. Applied Soft Computing Journal, 2007, 7, 929-935.	7.2	55
7	Modeling and Simulation of Mechanical Micro-Machiningâ€"A Review. Machining Science and Technology, 2014, 18, 323-347.	2.5	53
8	Size effects in micro drilling of carbon fiber reinforced plastic composite. Production Engineering, 2014, 8, 301-307.	2.3	48
9	Artificial Intelligence-Based Hole Quality Prediction in Micro-Drilling Using Multiple Sensors. Sensors, 2020, 20, 885.	3.8	48
10	A visco-hyperelastic approach to modelling rate-dependent large deformation of a dielectric acrylic elastomer. International Journal of Mechanics and Materials in Design, 2015, 11, 79-90.	3.0	47
11	Influences of TiAlN coating and limiting angles of flutes on prediction of cutting forces and dynamic stability in micro milling of die steel (P-20). Journal of Materials Processing Technology, 2020, 278, 116500.	6.3	47
12	Rate-dependent mechanical behavior of VHB 4910 elastomer. Mechanics of Advanced Materials and Structures, 2016, 23, 170-179.	2.6	44
13	Determination of minimum uncut chip thickness and size effects in micro-milling of P-20 die steel using surface quality and process signal parameters. International Journal of Advanced Manufacturing Technology, 2020, 106, 4675-4691.	3.0	43
14	Performance evaluation of tool coatings and nanofluid MQL on the micro-machinability of Ti-6Al-4V. Journal of Manufacturing Processes, 2022, 73, 595-610.	5.9	40
15	Modeling Cutting Force in Micro-Milling of Ti-6Al-4V Titanium Alloy. Procedia Engineering, 2015, 129, 134-139.	1.2	39
16	Experimental Study and Numerical Modelling of Creep and Stress Relaxation of Dielectric Elastomers. Strain, 2015, 51, 43-54.	2.4	39
17	Cutting force and hole quality analysis in micro-drilling of CFRP. Materials and Manufacturing Processes, 2018, 33, 1369-1377.	4.7	32
18	Fabrication of micro-textured surfaces using ball-end micromilling for wettability enhancement of Ti-6Al-4V. Journal of Materials Processing Technology, 2018, 262, 168-181.	6.3	32

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19	Mechanistic modeling of cutting forces in micro-end-milling considering tool run out, minimum chip thickness and tooth overlapping effects. Machining Science and Technology, 2019, 23, 407-430.	2.5	31
20	Manufacturing Miniature Products by Micro-grinding: A Review. Procedia Engineering, 2016, 150, 969-974.	1.2	30
21	A comprehensive review of micro-grinding: emphasis on toolings, performance analysis, modeling techniques, and future research directions. International Journal of Advanced Manufacturing Technology, 2019, 104, 63-102.	3.0	30
22	A study of the influence of processing parameters and tool wear on elastic displacements of the technological system under face milling. International Journal of Advanced Manufacturing Technology, 2017, 92, 4473-4486.	3.0	28
23	Micro ball-end milling—an emerging manufacturing technology for micro-feature patterns. International Journal of Advanced Manufacturing Technology, 2018, 94, 2821-2845.	3.0	28
24	On-machine texturing of PCD micro-tools for dry micro-slot grinding of BK7 glass. Precision Engineering, 2019, 55, 491-502.	3.4	28
25	Experimental Analysis of Cutting Forces in Microdrilling of Austenitic Stainless Steel (X5CrNi18-10). Materials and Manufacturing Processes, 2015, 30, 248-255.	4.7	27
26	Mechanistic modeling of micro-drilling cutting forces. International Journal of Advanced Manufacturing Technology, 2017, 88, 241-254.	3.0	27
27	Fracture toughness, hysteresis and stretchability of dielectric elastomers under equibiaxial and biaxial loading. Polymer Testing, 2019, 79, 106038.	4.8	27
28	Combined effects of tool surface texturing, cutting parameters and minimum quantity lubrication (MQL) pressure on micro-grinding of BK7 glass. Journal of Manufacturing Processes, 2020, 54, 374-392.	5.9	25
29	Particle swarm optimization of a neural network model in a machining process. Sadhana - Academy Proceedings in Engineering Sciences, 2014, 39, 533-548.	1.3	23
30	Cumulative reduction of friction and size effects in micro milling through proper selection of coating thickness of TiAlN coated tool: Experimental and analytical assessments. Journal of Manufacturing Processes, 2021, 67, 635-654.	5.9	23
31	Experimental analysis of ductile-brittle transitions for parallel and intersecting micro-slot grinding in BK-7 glass. Ceramics International, 2019, 45, 11013-11026.	4.8	22
32	Modeling Dynamic Stability and Cutting Forces in Micro Milling of Ti6Al4V Using Intermittent Oblique Cutting Finite Element Method Simulation-Based Force Coefficients. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2020, 142, .	2.2	21
33	Experimental and theoretical analysis of laterally pre-stretched pure shear deformation of dielectric elastomer. Polymer Testing, 2019, 75, 291-297.	4.8	20
34	Estimation and validation of maxwell stress of planar dielectric elastomer actuators. Journal of Mechanical Science and Technology, 2016, 30, 429-436.	1.5	18
35	Silicone composites cured under a high electric field: an electromechanical experimental study. Polymer Composites, 2021, 42, 914-930.	4.6	18
36	Monitoring of hole surface integrity in drilling of bi-directional woven carbon fiber reinforced plastic composites. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2020, 234, 2432-2458.	2.1	17

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37	Enhancement of electromechanical properties of natural rubber by adding barium titanate filler: An electroâ€mechanical study. Journal of Applied Polymer Science, 2021, 138, 50991.	2.6	16
38	Effect of different basis functions on a radial basis function network in prediction of drill flank wear from motor current signals. Soft Computing, 2008, 12, 777-787.	3.6	15
39	FUZZY RADIAL BASIS FUNCTION (FRBF) NETWORK BASED TOOL CONDITION MONITORING SYSTEM USING VIBRATION SIGNALS. Machining Science and Technology, 2010, 14, 280-300.	2.5	15
40	Tribological performances of symmetrically micro-textured Ti-6Al-4V alloy for hip joint. International Journal of Mechanical Sciences, 2020, 182, 105736.	6.7	15
41	Modeling and analysis of temperature distribution in the multilayer metal composite structures in grinding. International Journal of Advanced Manufacturing Technology, 2017, 91, 4055-4068.	3.0	13
42	Effects of electric discharge dressing parameters on polycrystalline diamond micro-tool surface topography and their micro-grinding performances. International Journal of Refractory Metals and Hard Materials, 2019, 82, 297-309.	3.8	13
43	Inâ€plane actuation performance of graphene oxide filled VHB 4910 dielectric elastomer. Journal of Applied Polymer Science, 2022, 139, 51594.	2.6	13
44	Genetically evolved radial basis function network based prediction of drill flank wear. Engineering Applications of Artificial Intelligence, 2010, 23, 1112-1120.	8.1	12
45	Experimental study and phenomenological modelling of flaw sensitivity of two polymers used as dielectric elastomers. Continuum Mechanics and Thermodynamics, 2020, 32, 489-500.	2.2	12
46	Finite Element Method Based Modeling for Prediction of Cutting Forces in Micro-end Milling. Journal of the Institution of Engineers (India): Series C, 2017, 98, 17-26.	1.2	11
47	Direction dependent dynamic wetting of semi-hemispherical end micro-groove textured Ti-6Al-4V surface. Surface and Coatings Technology, 2018, 356, 138-149.	4.8	11
48	Analysis of the Deviation in a Low-Cost System for Stepless Digital Control of Conventional Lathe Spindle Speeds. Applied Sciences (Switzerland), 2019, 9, 12.	2.5	11
49	CRACK PROPAGATION BEHAVIOR OF LATERALLY CONSTRAINED POLYMERS USED AS DIELECTRIC ELASTOMERS. Rubber Chemistry and Technology, 2021, 94, 476-493.	1.2	11
50	Enhancement of micro milling performance by abrasion-resistant coated tools with optimized thin-film thickness: analytical and experimental characterization. International Journal of Advanced Manufacturing Technology, 2022, 120, 2993-3015.	3.0	11
51	Dissipation Factor of Acrylic Dielectric Elastomerâ€"An Experimental Study. Journal of Nanoscience and Nanotechnology, 2014, 14, 7439-7444.	0.9	10
52	Size effects in Micro End-Milling of Hardened P-20 Steel. Materials Today: Proceedings, 2018, 5, 23726-23732.	1.8	10
53	Dependence of Actuation Strain of Dielectric Elastomer on Equi-biaxial, Pure Shear and Uniaxial Modes of Pre-stretching. IOP Conference Series: Materials Science and Engineering, 2018, 310, 012104.	0.6	10
54	Barium titanate particle filled silicone elastomer composite: Preparation and evaluation of morphology and mechanical behaviour. Journal of Physics: Conference Series, 2019, 1240, 012049.	0.4	10

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55	Effects of crosslink density on the behavior of VHB 4910 dielectric elastomer. Journal of Macromolecular Science - Pure and Applied Chemistry, 2019, 56, 821-829.	2.2	10
56	Obtaining Various Shapes of Machined Surface Using a Tool with a Multi-Insert Cutting Edge. Applied Sciences (Switzerland), 2019, 9, 880.	2.5	10
57	Estimation of Elastic Modulus of Dielectric Elastomer Materials Using Mooney-Rivlin and Ogden Models. Advanced Materials Research, 2013, 685, 331-335.	0.3	8
58	High-Accuracy 3D Optical Profilometry for Analysis of Surface Condition of Modern Circulated Coins. Materials, 2020, 13, 5371.	2.9	8
59	A Study on the Machinability of Steels and Alloys to Develop Recommendations for Setting Tool Performance Characteristics and Belt Grinding Modes. Materials, 2020, 13, 3978.	2.9	8
60	Proposal of a generic constitutive model for deformation-dependent dielectric constant of dielectric elastomers. Engineering Science and Technology, an International Journal, 2021, 24, 1347-1360.	3.2	8
61	Tool condition monitoring in micro-drilling using vibration signals and artificial neural network: Subtitle: TCM in micro-drilling using vibration signals. , 2017, , .		7
62	Review on cryogenic assisted micro-machining of soft polymer: An emphasis on molecular physics, chamber design, performance analysis and sustainability. Journal of Manufacturing Processes, 2022, 80, 930-957.	5.9	7
63	Characterisation of Tensile Behaviour of a Dielectric Elastomer at Large Deformation. Journal of the Institution of Engineers (India): Series C, 2014, 95, 207-212.	1.2	6
64	Dynamic Model of Material Deforming Under Microgrinding. Procedia Engineering, 2015, 129, 127-133.	1.2	6
65	Polyvinylidene Fluoride/Hydrogenated Nitrile Rubber-Based Flexible Electroactive Polymer Blend and Its Nanocomposites with Improved Actuated Strain: Characterization and Analysis of Electrostrictive Behavior. Industrial & Engineering Chemistry Research, 2020, 59, 3413-3424.	3.7	6
66	Micro–nano surface texturing, characterization, and their impact on biointerfaces. , 2021, , 577-610.		6
67	Experimental Investigation of Tool Breakage in Micro Drilling of EN AW-5083 Aluminium. Key Engineering Materials, 0, 581, 119-124.	0.4	5
68	Enhancing Performances of Micro-Grinding of BK-7 Glass through Modification of PCD Micro-Tool. Procedia Engineering, 2017, 206, 1365-1370.	1.2	5
69	An effective and affordable technique for human motion capturing and teleoperation of a humanoid robot using an exoskeleton. , 2017, , .		5
70	Electromechanical performance analysis of inflated dielectric elastomer membrane for micro pump applications. Proceedings of SPIE, 2016, , .	0.8	4
71	Comparison of circuits for dielectric elastomer based energy harvesting. , 2018, , .		4
72	On stability analysis for micro milling of P-20 steel: Enhancement through application of TiAlN coated WC tool. Materials Today: Proceedings, 2020, 28, 856-859.	1.8	4

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73	Obstacle avoidance for mobile robot navigation in unknown environment using geometrical information of mobile camera images. International Journal of Computational Vision and Robotics, 2014, 4, 39.	0.3	3
74	Evaluation of area strain response of dielectric elastomer actuator using image processing technique. , 2014, , .		3
75	The Effect of Micro Molecular Parameters on the Actuation Performance of Electro Active Polymers. , 2017, , .		3
76	A Controlled Conditioning Interface Unit for Dielectric Elastomer Generator. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 5620-5628.	4.7	3
77	Drill Wear Monitoring through Current Signature Analysis using Wavelet Packet Transform and Artificial Neural Network. , 2006, , .		2
78	Application of wavelet packet transform based Normalised Radial Basis Function Network in a machining process. International Journal of Materials and Product Technology, 2009, 35, 184.	0.2	2
79	Strategies for intelligent drill wear prediction using multiple sensor signals. International Journal of Mechatronics and Manufacturing Systems, 2013, 6, 493.	0.1	2
80	Extracting Specific Cutting Force Coefficients in Micro Drilling with Tool Edge Radius Effects<sup> </sup>. Applied Mechanics and Materials, 0, 799-800, 256-260.	0.2	2
81	Effects of uniaxial and biaxial strain on molecular structure of VHB 4910 dielectric elastomer. AIP Conference Proceedings, 2019, , .	0.4	2
82	Evolution of chemo-mechanical effects during single grit diamond scratching of monocrystalline silicon in the presence of potassium hydroxide. Wear, 2020, 452-453, 203292.	3.1	2
83	Analysis of Stretch-Dependent Capacitance and Its Effects on Energy Conversion of a Donut-Shaped Dielectric Elastomer Generator. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-10.	4.7	2
84	Novel tool design to tailor debris migration and tool wear mechanism in micro-slot grinding. Wear, 2022, 494-495, 204240.	3.1	2
85	Neural network based prediction of drill wear from theoretically analysed and experimentally measured values of thrust force and torque. International Journal of Machining and Machinability of Materials, 2009, 5, 207.	0.1	1
86	Raman spectroscopy of pre-strained VHB 4910 elastomer towards actuator application. Vibrational Spectroscopy, 2020, 106, 102994.	2.2	1
87	Energy Harvesting from Knee Motion Using Dielectric Elastomer Generator. Smart Innovation, Systems and Technologies, 2020, , 1261-1272.	0.6	1
88	Externally powered upper limb prostheses. , 2015, , .		0
89	Application of Artificial neural network and wavelet packet transform for vibration signal based monitoring in mechanical micro drilling. , 2015, , .		0
90	Effect of Water and KOH Aqueous Solution on Micro-slot Grinding of Silicon. Lecture Notes on Multidisciplinary Industrial Engineering, 2019, , 61-70.	0.6	0

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91	Influences of Feed Rate and Machining Length in Micro-milling of P-20 Steel. Lecture Notes in Mechanical Engineering, 2020, , 119-125.	0.4	0