

Professor Neelesh Kumar Jain

List of Publications by Year in descending order

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124
papers

2,414
citations

236833

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129
docs citations

129
times ranked

1512
citing authors

#	ARTICLE	IF	CITATIONS
1	Additive Manufacturing of AA6063-ZrO ₂ Composite Using Friction Stir Surface Additive Manufacturing. Transactions of the Indian Institute of Metals, 2023, 76, 581-588.	0.7	4
2	Developments in friction stir welding of aluminium to magnesium alloy. Journal of Adhesion Science and Technology, 2022, 36, 1365-1402.	1.4	20
3	Development of theoretical models for dimensions of single-layer multi-track and multi-layer multi-track depositions by $\frac{1}{4}$ -PTA additive manufacturing process. Journal of Materials Research and Technology, 2022, 17, 95-110.	2.6	4
4	Using abrasive flow finishing process to reduce noise and vibrations of cylindrical and conical gears. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2022, 236, 1341-1354.	1.5	7
5	Surface roughness prediction in micro-plasma transferred arc metal additive manufacturing process using K-nearest neighbors algorithm. International Journal of Advanced Manufacturing Technology, 2022, 119, 2985-2997.	1.5	14
6	Sustainability and performance assessment of gear hobbing under different lubrication environments for manufacturing of 20MnCr5 spur gears. Sustainable Materials and Technologies, 2022, 31, e00388.	1.7	2
7	Performance comparison of green lubricants in gear hobbing with minimum quantity lubrication. Tribology International, 2022, 173, 107582.	3.0	6
8	Development of friction stir powder deposition process for repairing of aerospace-grade aluminum alloys. CIRP Journal of Manufacturing Science and Technology, 2022, 38, 252-267.	2.3	13
9	Exploring temperature-controlled friction stir powder additive manufacturing process for multi-layer deposition of aluminum alloys. Journal of Materials Research and Technology, 2022, 20, 260-268.	2.6	13
10	Achieving sustainability in machining of cylindrical gears. , 2021, , 391-426.		2
11	Engineered Nanomaterials for Aviation Industry in COVID-19 Context: A Time-Sensitive Review. Coatings, 2021, 11, 382.	1.2	16
12	Simultaneous improvement of microgeometry and surface quality of spur and straight bevel gears by abrasive flow finishing process. Journal of Micromanufacturing, 2021, 4, 189-206.	0.6	3
13	On Abrasive Flow Finishing of Straight Bevel Gear. Lecture Notes in Intelligent Transportation and Infrastructure, 2021, , 95-104.	0.3	0
14	Optimization of process parameters in micro-plasma transferred arc deposition process for cobalt-based alloy. Materials Today: Proceedings, 2021, 44, 1681-1686.	0.9	4
15	A Comprehensive Investigation on Development of Lightweight Aluminium Miniature Gears by Thermoelectric Erosion Machining Process. Micromachines, 2021, 12, 1230.	1.4	4
16	Optimization of parameters of micro-plasma transferred arc additive manufacturing process using real coded genetic algorithm. International Journal of Advanced Manufacturing Technology, 2020, 106, 1239-1252.	1.5	15
17	Influence of MQL and hobbing parameters on microgeometry deviations and flank roughness of spur gears manufactured by MQL assisted hobbing. Journal of Materials Research and Technology, 2020, 9, 9646-9656.	2.6	12
18	Predictive modelling and parametric optimization of minimum quantity lubrication assisted hobbing process. International Journal of Advanced Manufacturing Technology, 2020, 109, 1681-1694.	1.5	7

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19	Laser texturing of helical and straight bevel gears to enhance finishing performance of AFF process. International Journal of Advanced Manufacturing Technology, 2020, 110, 2221-2238.	1.5	5
20	Effect of material form on deposition characteristics in micro-plasma transferred arc additive manufacturing process. CIRP Journal of Manufacturing Science and Technology, 2020, 30, 195-205.	2.3	15
21	Modeling of dimensions and investigations on geometrical deviations of metallic components manufactured by 1/4-plasma transferred arc additive manufacturing process. International Journal of Advanced Manufacturing Technology, 2020, 107, 3155-3168.	1.5	8
22	Advances in Abrasive Flow Finishing. Materials Forming, Machining and Tribology, 2020, , 147-181.	0.7	4
23	Effect of Finishing Time on Surface Finish of Spur Gears by Abrasive Flow Finishing (AFF) Process. Lecture Notes on Multidisciplinary Industrial Engineering, 2020, , 101-111.	0.4	1
24	Multiscale surface texture and fractal analysis of straight bevel gears finished by PECH and PECF process. Materials and Manufacturing Processes, 2019, 34, 1882-1887.	2.7	5
25	Theoretical modeling and finite element simulation of dilution in micro-plasma transferred arc additive manufacturing of metallic materials. International Journal of Mechanical Sciences, 2019, 164, 105166.	3.6	15
26	Investigations on thin SS sheets joining by pulsed micro-plasma transferred arc process. Journal of Micromanufacturing, 2019, 2, 15-24.	0.6	5
27	Modeling and Prediction of Residual Stresses in Additive Layer Manufacturing by Microplasma Transferred Arc Process Using Finite Element Simulation. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2019, 141, .	1.3	14
28	Experimental investigations on surface finish and microgeometry of helical gear in pulsed-electrochemical honing process. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2019, 233, 3364-3375.	1.1	4
29	Study of laser texturing assisted abrasive flow finishing for enhancing surface quality and microgeometry of spur gears. International Journal of Advanced Manufacturing Technology, 2019, 101, 785-799.	1.5	24
30	Synthesis of Copper Nanoparticles by Pulsed Electrochemical Dissolution Process. Industrial & Engineering Chemistry Research, 2019, 58, 602-608.	1.8	9
31	Analysis and multi-response optimization of gear quality and surface finish of meso-sized helical and bevel gears manufactured by WSEM process. Precision Engineering, 2019, 55, 293-309.	1.8	17
32	On simultaneous improvement of wear characteristics, surface finish and microgeometry of straight bevel gears by abrasive flow finishing process. Wear, 2018, 404-405, 38-49.	1.5	28
33	A critical review of past research and advances in abrasive flow finishing process. International Journal of Advanced Manufacturing Technology, 2018, 97, 741-782.	1.5	59
34	Investigations on surface quality of WEDM-manufactured meso bevel and helical gears. Materials and Manufacturing Processes, 2018, 33, 1568-1577.	2.7	21
35	Capabilities evaluation of WSEM, milling and hobbing for meso-gear manufacturing. Materials and Manufacturing Processes, 2018, 33, 1539-1548.	2.7	6
36	3D-finite element simulation and image processing based prediction of width and height of single-layer deposition by micro-plasma-transferred arc process. International Journal of Advanced Manufacturing Technology, 2018, 95, 3679-3691.	1.5	12

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37	State-of-art review of past research on manufacturing of meso and micro cylindrical gears. Precision Engineering, 2018, 51, 702-728.	1.8	26
38	Evaluation of stellite coatings by $\hat{\text{A}}\mu$ -PTA powder, laser, and PTA deposition processes. Materials and Manufacturing Processes, 2018, 33, 1043-1050.	2.7	21
39	Improving spur gear microgeometry and surface finish by AFF process. Materials and Manufacturing Processes, 2018, 33, 923-934.	2.7	24
40	Finite Element Simulation of Pre-Heating Effect on Melt Pool Size During Micro-Plasma Transferred Arc Deposition Process. IOP Conference Series: Materials Science and Engineering, 2018, 389, 012006.	0.3	2
41	On Productivity of WSEM Process for Manufacturing Meso-Sized Helical and Bevel Gears. IOP Conference Series: Materials Science and Engineering, 2018, 389, 012007.	0.3	3
42	Exploring WSEM Process for Manufacturing Meso Helical and Bevel Gears. Materials Today: Proceedings, 2018, 5, 18552-18561.	0.9	2
43	Performance of pulsed-electrochemical honing and pulsed-electrochemical finishing in improving quality of bevel gears. Manufacturing Review, 2018, 5, 14.	0.9	3
44	Investigations on joining of stainless steel tailored blanks by $\hat{\text{A}}\mu$ -PTA process. Materials and Manufacturing Processes, 2018, 33, 1851-1863.	2.7	14
45	Investigations on Additive Manufacturing of Ti $\hat{\text{A}}\text{6Al}\hat{\text{A}}\text{4V}$ by Microplasma Transferred Arc Powder Deposition Process. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2018, 140, .	1.3	20
46	Influence of dimple and spot-texturing of HSS cutting tool on machining of Ti-6Al-4V. Journal of Materials Processing Technology, 2018, 261, 1-11.	3.1	46
47	Investigations on wear characteristics of Stellite coating by micro-plasma transferred arc powder deposition process. Wear, 2017, 378-379, 155-164.	1.5	51
48	Modeling and experimental validation of volumetric material removal rate and surface roughness depth of straight bevel gears in pulsed-ECH process. International Journal of Mechanical Sciences, 2017, 124-125, 132-144.	3.6	14
49	Laser-Based Repair of Damaged Dies, Molds, and Gears. Materials Forming, Machining and Tribology, 2017, , 137-159.	0.7	4
50	Critical review of electrochemical honing (ECH): sustainable and alternative gear finishing process. Part 1: conventional processes and introduction to ECH. Transactions of the Institute of Metal Finishing, 2017, 95, 147-157.	0.6	5
51	Critical review of electrochemical honing: sustainable and alternative gear finishing process. Part 2: effects of various process parameters on surface characteristics and material removal rate. Transactions of the Institute of Metal Finishing, 2017, 95, 241-254.	0.6	2
52	Characteristics of Single-Track and Multi-track Depositions of Stellite by Micro-plasma Transferred Arc Powder Deposition Process. Journal of Materials Engineering and Performance, 2017, 26, 4029-4039.	1.2	15
53	Investigations on microgeometry of meso bevel and meso helical gears manufactured by WEDM process. International Journal of Advanced Manufacturing Technology, 2017, 93, 4217-4231.	1.5	10
54	Three-dimensional thermal analysis of multi-layer metallic deposition by micro-plasma transferred arc process using finite element simulation. Journal of Materials Processing Technology, 2017, 249, 264-273.	3.1	23

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55	Overview of Wire Spark Erosion Machining (WSEM). Materials Forming, Machining and Tribology, 2017, , 17-33.	0.7	5
56	Planning, Design and Details of Experimental Investigation. Materials Forming, Machining and Tribology, 2017, , 35-55.	0.7	0
57	Effect of applied voltage and electrolyte parameters on pitch, runout, flank topology, and finishing productivity of the straight bevel gears in PECH process. Materials and Manufacturing Processes, 2017, 32, 339-347.	2.7	14
58	1.4 Review of Gear Finishing Processes. , 2017, , 93-120.		10
59	1.17 Review of Miniature Gear Manufacturing. , 2017, , 504-538.		11
60	3.23 Electrochemical Processing and Surface Finish. , 2017, , 358-380.		0
61	Advances in Gear Manufacturing. , 2017, , 67-125.		19
62	Experimental Results and Analysis. Materials Forming, Machining and Tribology, 2017, , 57-86.	0.7	0
63	Modelling and Optimization. Materials Forming, Machining and Tribology, 2017, , 87-117.	0.7	3
64	Measurement of Gear Accuracy. , 2017, , 197-218.		0
65	Conventional Manufacturing of Cylindrical Gears. , 2017, , 35-51.		2
66	Experimental investigations on redefining the surface quality of bevel gears by pulsed electrochemical honing. Transactions of the Institute of Metal Finishing, 2016, 94, 64-69.	0.6	7
67	Micro-Plasma Transferred Arc Additive Manufacturing for Die and Mold Surface Remanufacturing. Jom, 2016, 68, 1801-1809.	0.9	34
68	Modelling and process optimisation for wire electric discharge machining of metal matrix composites. International Journal of Machining and Machinability of Materials, 2016, 18, 377.	0.1	15
69	Near-Net Shape Manufacturing of Miniature Spur Gears by Wire Spark Erosion Machining. Materials Forming, Machining and Tribology, 2016, , .	0.7	8
70	Investigations on surface quality, surface integrity and specific energy consumption in finishing of straight bevel gears by PECH process. International Journal of Advanced Manufacturing Technology, 2016, 85, 2207-2222.	1.5	14
71	Effect of honing gear hardness on microgeometry and surface quality improvement of straight bevel gears in PECH process. International Journal of Advanced Manufacturing Technology, 2016, 85, 2197-2205.	1.5	13
72	Investigations on surface quality improvement of straight bevel gears by electrochemical honing process. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2016, 230, 1242-1253.	1.5	13

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73	Investigations on geometry and productivity of micro-holes in Incoloy 800 by pulsed electrolytic jet drilling. International Journal of Advanced Manufacturing Technology, 2016, 85, 2083-2095.	1.5	6
74	Investigations on micro-geometry improvement of straight bevel gears finished by electrochemical honing process. International Journal of Advanced Manufacturing Technology, 2016, 85, 2223-2234.	1.5	6
75	Thermal modeling of geometry of single-track deposition in micro-plasma transferred arc deposition process. Journal of Materials Processing Technology, 2016, 230, 121-130.	3.1	23
76	Overview of Hybrid Machining Processes. SpringerBriefs in Applied Sciences and Technology, 2016, , 1-7.	0.2	3
77	Recent developments in sustainable manufacturing of gears: a review. Journal of Cleaner Production, 2016, 112, 3320-3330.	4.6	159
78	Hybrid Machining Processes. SpringerBriefs in Applied Sciences and Technology, 2016, , .	0.2	23
79	Performance enhancement of electrochemical honing process using ANN approach for bevel gear finishing. International Journal of Precision Technology, 2015, 5, 157.	0.2	2
80	Effect of finishing time and electrolyte composition on geometric accuracy and surface finish of straight bevel gears in ECH process. CIRP Journal of Manufacturing Science and Technology, 2015, 8, 53-62.	2.3	10
81	Process Performance Comparison of ECH and PECH for Quality Enhancement of Bevel Gears. Materials and Manufacturing Processes, 2015, 30, 836-841.	2.7	11
82	Spark erosion machining of miniature gears: a critical review. International Journal of Advanced Manufacturing Technology, 2015, 80, 1863-1877.	1.5	24
83	Investigation on Solid State Nd-YAG nanosecond Laser Assisted Shock Peening of Miniature Gears. Materials Today: Proceedings, 2015, 2, 1755-1762.	0.9	0
84	On Use of Pulsed-Electrochemical Honing to Improve Micro-Geometry of Bevel Gears. Materials and Manufacturing Processes, 2014, 29, 1461-1469.	2.7	19
85	Exploring Wire-EDM for Manufacturing the High Quality Meso-gears. , 2014, 5, 1755-1760.		10
86	Experimental investigation on geometrical aspects of micro-plasma deposited tool steel for repair applications. International Journal of Modern Physics Conference Series, 2014, 32, 1460347.	0.7	2
87	Development of micro-plasma transferred arc (1/4-PTA) wire deposition process for additive layer manufacturing applications. Journal of Materials Processing Technology, 2014, 214, 1102-1110.	3.1	109
88	Analysis and optimization of micro-geometry of miniature spur gears manufactured by wire electric discharge machining. Precision Engineering, 2014, 38, 728-737.	1.8	51
89	Analysis and optimization of surface finish of wire electrical discharge machined miniature gears. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2014, 228, 673-681.	1.5	26
90	Failure analysis of air cooled condenser gearbox. Case Studies in Engineering Failure Analysis, 2014, 2, 150-156.	1.2	11

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91	Enhancement of Deposition Quality in Micro-plasma Transferred Arc Deposition Process. Materials and Manufacturing Processes, 2014, 29, 1017-1023.	2.7	26
92	Comparative Study of Wire-EDM and Hobbing for Manufacturing High-Quality Miniature Gears. Materials and Manufacturing Processes, 2014, 29, 1470-1476.	2.7	47
93	On surface integrity of miniature spur gears manufactured by wire electrical discharge machining. International Journal of Advanced Manufacturing Technology, 2014, 72, 1735-1745.	1.5	39
94	Modeling of material removal rate and surface roughness in finishing of bevel gears by electrochemical honing process. Journal of Materials Processing Technology, 2014, 214, 200-209.	3.1	43
95	RSM and ANN Modeling Approaches For Predicting Average Cutting Speed During WEDM of SiCp/6061 Al MMC. Procedia Engineering, 2013, 64, 767-774.	1.2	59
96	Causes of failure and repairing options for dies and molds: A review. Engineering Failure Analysis, 2013, 34, 519-535.	1.8	153
97	On Micro-Geometry of Miniature Gears Manufactured by Wire Electrical Discharge Machining. Materials and Manufacturing Processes, 2013, 28, 1153-1159.	2.7	30
98	Deviations in Geometry of Miniature Gears Fabricated by Wire Electrical Discharge Machining. , 2013, , .		15
99	Precision Finishing of Bevel Gears by Electrochemical Honing. Materials and Manufacturing Processes, 2013, 28, 1117-1123.	2.7	34
100	Investigations on tool wear and material deposition aspects of TiC coating on aluminium by electro discharge coating process. International Journal of Manufacturing Technology and Management, 2013, 27, 251.	0.1	7
101	Manufacturing of High Quality Miniature Gears by Wire Electric Discharge Machining. DAAAM International Scientific Book, 2013, , 679-696.	0.1	4
102	High Quality Finishing of Bevel Gears by Electrochemical Honing. DAAAM International Scientific Book, 2013, , 697-710.	0.1	0
103	Prediction of surface roughness during wire electrical discharge machining of SiC_p/6061 Al metal matrix composite. International Journal of Industrial and Systems Engineering, 2012, 12, 301.	0.1	21
104	Effects of electrolyte composition and temperature on precision finishing of spur gears by pulse electrochemical honing (PECH). International Journal of Precision Technology, 2012, 3, 37.	0.2	17
105	Parametric Optimization During Wire Electrical Discharge Machining using Response Surface Methodology. Procedia Engineering, 2012, 38, 2371-2377.	1.2	89
106	On wire breakage and microstructure in WEDC of SiCp/6061 aluminum metal matrix composites. International Journal of Advanced Manufacturing Technology, 2012, 61, 1199-1207.	1.5	17
107	Wire Electric Discharge Machining of Metal Matrix Composite Materials. , 2011, , .		6
108	Experimental Studies on Wire Electric Discharge Cutting of SiC_p/6061 Aluminum Metal Matrix Composites. Key Engineering Materials, 2010, 450, 173-176.	0.4	10

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109	Investigations on precision finishing of helical gears by electrochemical honing process. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2010, 224, 1817-1830.	1.5	35
110	State-of-art-review of electrochemical honing of internal cylinders and gears. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2009, 223, 665-681.	1.5	27
111	Effect of stir-casting on the microstructure and adhesive wear characteristics of cast Al-Si-Cu alloy. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2009, 223, 83-87.	1.5	5
112	Precision microfinishing by electro-chemical honing. International Journal of Manufacturing Technology and Management, 2009, 17, 364.	0.1	5
113	Adhesive wear of stir cast hypereutectic Al-Si-Mg alloy under reciprocating sliding conditions. Wear, 2009, 266, 1-5.	1.5	32
114	Analysis of surface roughness and out-of-roundness in the electro-chemical honing of internal cylinders. International Journal of Advanced Manufacturing Technology, 2008, 38, 491-500.	1.5	18
115	OPTIMIZATION OF ELECTRO-CHEMICAL MACHINING PROCESS PARAMETERS USING GENETIC ALGORITHMS. Machining Science and Technology, 2007, 11, 235-258.	1.4	54
116	Optimization of process parameters of mechanical type advanced machining processes using genetic algorithms. International Journal of Machine Tools and Manufacture, 2007, 47, 900-919.	6.2	121
117	Parametric optimization of advanced fine-finishing processes. International Journal of Advanced Manufacturing Technology, 2007, 34, 1191-1213.	1.5	47
118	PROCESS SELECTION METHODOLOGY FOR ADVANCED MACHINING PROCESSES. Journal of Advanced Manufacturing Systems, 2003, 02, 5-45.	0.4	7
119	Modeling of material removal in mechanical type advanced machining processes: a state-of-art review. International Journal of Machine Tools and Manufacture, 2001, 41, 1573-1635.	6.2	86
120	A feature-less approach to process planning. , 0, , .		2
121	Neural Network Based Modeling in Wire Electric Discharge Machining of SiC_p/6061 Aluminum Metal Matrix Composite. Advanced Materials Research, 0, 383-390, 6679-6683.	0.3	2
122	Study on Wire Electric Discharge Machining Based on Response Surface Methodology and Genetic Algorithm. Advanced Materials Research, 0, 622-623, 1280-1284.	0.3	1
123	Developing Spiral-Conical Gears for Microsystems by Wire-Assisted Electrical Discharge Machining. Key Engineering Materials, 0, 910, 421-435.	0.4	1
124	Flank Surface Treatment of Spur Gears Machined by MQL Assisted Hobbing Using Micro-Plasma Transferred Arc. Defect and Diffusion Forum, 0, 417, 29-34.	0.4	0