

# Vijay Kumar Jain

## List of Publications by Year in descending order

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74  
papers

2,129  
citations

201385

27  
h-index

264894

42  
g-index

76  
all docs

76  
docs citations

76  
times ranked

846  
citing authors

#	ARTICLE	IF	CITATIONS
1	ANALYSIS OF SPARK PROFILES DURING EDM PROCESS. <i>Machining Science and Technology</i> , 1997, 1, 195-217.	1.4	120
2	Experimental investigations into forces acting during a magnetic abrasive finishing process. <i>International Journal of Advanced Manufacturing Technology</i> , 2006, 30, 652-662.	1.5	103
3	Experimental Investigations into Traveling Wire Electrochemical Spark Machining (TW-ECSM) of Composites. <i>Journal of Engineering for Industry</i> , 1991, 113, 75-84.	0.8	83
4	NANO-FINISHING OF STAINLESS-STEEL TUBES USING ROTATIONAL MAGNETORHEOLOGICAL ABRASIVE FLOW FINISHING PROCESS. <i>Machining Science and Technology</i> , 2010, 14, 365-389.	1.4	74
5	Modeling and Simulation of Surface Roughness in Magnetic Abrasive Finishing Using Non-Uniform Surface Profiles. <i>Materials and Manufacturing Processes</i> , 2007, 22, 256-270.	2.7	62
6	Experimental investigations and modeling of drill bit-guided abrasive flow finishing (DBG-AFF) process. <i>International Journal of Advanced Manufacturing Technology</i> , 2009, 42, 678-688.	1.5	62
7	ELECTRICAL DISCHARGE DIAMOND GRINDING OF HIGH SPEED STEEL. <i>Machining Science and Technology</i> , 1999, 3, 91-105.	1.4	61
8	Prediction of surface roughness during abrasive flow machining. <i>International Journal of Advanced Manufacturing Technology</i> , 2006, 31, 258-267.	1.5	59
9	Rheological characterization of magnetorheological polishing fluid for MRAFF. <i>International Journal of Advanced Manufacturing Technology</i> , 2009, 42, 656-668.	1.5	59
10	Development of a cutting tool condition monitoring system for high speed turning operation by vibration and strain analysis. <i>International Journal of Advanced Manufacturing Technology</i> , 2008, 37, 471-485.	1.5	56
11	OPTIMIZATION OF ELECTRO-CHEMICAL MACHINING PROCESS PARAMETERS USING GENETIC ALGORITHMS. <i>Machining Science and Technology</i> , 2007, 11, 235-258.	1.4	54
12	Fabrication of micro-features and micro-tools using electrochemical micromachining. <i>International Journal of Advanced Manufacturing Technology</i> , 2012, 61, 1175-1183.	1.5	54
13	Analysis of magnetorheological abrasive flow finishing (MRAFF) process. <i>International Journal of Advanced Manufacturing Technology</i> , 2008, 38, 613-621.	1.5	52
14	Hole quality and interelectrode gap dynamics during pulse current electrochemical deep hole drilling. <i>International Journal of Advanced Manufacturing Technology</i> , 2007, 34, 79-95.	1.5	49
15	Rheological Properties and Their Correlation with Surface Finish Quality in MR Fluid-Based Finishing Process. <i>Machining Science and Technology</i> , 2014, 18, 367-385.	1.4	49
16	Parametric optimization of advanced fine-finishing processes. <i>International Journal of Advanced Manufacturing Technology</i> , 2007, 34, 1191-1213.	1.5	47
17	The Out-of-Roundness of the Internal Surfaces of Stainless Steel Tubes Finished by the Rotational "Magnetorheological Abrasive Flow Finishing Process. <i>Materials and Manufacturing Processes</i> , 2011, 26, 1073-1084.	2.7	47
18	Effect of extrusion pressure and number of finishing cycles on surface roughness in magnetorheological abrasive flow finishing (MRAFF) process. <i>International Journal of Advanced Manufacturing Technology</i> , 2007, 33, 725-729.	1.5	46

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19	ON THE PERFORMANCE ANALYSIS OF FLEXIBLE MAGNETIC ABRASIVE BRUSH. <i>Machining Science and Technology</i> , 2005, 9, 601-619.	1.4	45
20	Effect of fluid composition on nanofinishing of single-crystal silicon by magnetic field-assisted finishing process. <i>International Journal of Advanced Manufacturing Technology</i> , 2011, 55, 243-252.	1.5	43
21	Electrochemical micro texturing on flat and curved surfaces: simulation and experiments. <i>International Journal of Advanced Manufacturing Technology</i> , 2019, 100, 1269-1286.	1.5	41
22	A Theoretical Assessment of Surface Defect Machining and Hot Machining of Nanocrystalline Silicon Carbide. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2014, 136, .	1.3	39
23	Fabrication of Microchannels in Ceramics (Quartz) Using Electrochemical Spark Micromachining (ECMM). <i>Journal of Advanced Manufacturing Systems</i> , 2014, 13, 5-16.	0.4	35
24	On the effect of relative size of magnetic particles and abrasive particles in MR fluid-based finishing process. <i>Machining Science and Technology</i> , 2018, 22, 493-506.	1.4	35
25	Experimental investigations into nanofinishing of Ti6Al4V flat disc using magnetorheological finishing process. <i>International Journal of Advanced Manufacturing Technology</i> , 2019, 100, 1055-1065.	1.5	32
26	Predicting radial overcut in deep holes drilled by shaped tube electrochemical machining. <i>International Journal of Advanced Manufacturing Technology</i> , 2008, 39, 47-54.	1.5	29
27	Experimental investigations into surface roughness and yield stress in magnetorheological fluid based nano-finishing process. <i>International Journal of Precision Engineering and Manufacturing</i> , 2012, 13, 855-860.	1.1	29
28	Nano-finishing of cylindrical hard steel tubes using rotational abrasive flow finishing (R-AFF) process. <i>International Journal of Advanced Manufacturing Technology</i> , 2016, 85, 2179-2187.	1.5	29
29	Reducing overcut in electrochemical micromachining process by altering the energy of voltage pulse using sinusoidal and triangular waveform. <i>International Journal of Machine Tools and Manufacture</i> , 2020, 151, 103526.	6.2	28
30	Tool Design for ECM: Correction Factor Method. <i>Journal of Engineering for Industry</i> , 1988, 110, 111-118.	0.8	27
31	A 2D CFD simulation of MR polishing medium in magnetic field-assisted finishing process using electromagnet. <i>International Journal of Advanced Manufacturing Technology</i> , 2015, 76, 173-187.	1.5	27
32	Analysis of finishing forces and surface finish during magnetorheological abrasive flow finishing of asymmetric workpieces. <i>Journal of Micromanufacturing</i> , 2019, 2, 133-151.	0.6	26
33	ANALYSIS OF PERFORMANCE OF PULSATING FLEXIBLE MAGNETIC ABRASIVE BRUSH (P-FMAB). <i>Machining Science and Technology</i> , 2008, 12, 53-76.	1.4	25
34	Some aspects of fabrication of micro devices by electrochemical micromachining (ECMM) and its finishing by magnetorheological fluid. <i>International Journal of Advanced Manufacturing Technology</i> , 2012, 59, 987-996.	1.5	24
35	Viscoelastic medium modeling and surface roughness simulation of microholes finished by abrasive flow finishing process. <i>International Journal of Advanced Manufacturing Technology</i> , 2019, 100, 1165-1182.	1.5	24
36	Preliminary investigations into nano-finishing of freeform surface (femoral) using inverse replica fixture. <i>International Journal of Advanced Manufacturing Technology</i> , 2019, 100, 1081-1092.	1.5	24

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37	Experimental and theoretical investigations into internal magnetic abrasive finishing of a revolver barrel. International Journal of Advanced Manufacturing Technology, 2019, 100, 1105-1122.	1.5	24
38	Finishing force analysis and simulation of nanosurface roughness in abrasive flow finishing process using medium rheological properties. International Journal of Advanced Manufacturing Technology, 2016, 85, 2163-2178.	1.5	23
39	Differential finishing of freeform surfaces (knee joint) using R-MRAFF process and negative replica of workpiece as a fixture. Machining Science and Technology, 2018, 22, 671-695.	1.4	23
40	Simulation and experimental investigations into abrasive flow nanofinishing of surgical stainless steel tubes. Machining Science and Technology, 2018, 22, 454-475.	1.4	22
41	Investigations into the mechanism of material removal and surface modification at atomic scale on stainless steel using molecular dynamics simulation. Philosophical Magazine, 2018, 98, 1437-1469.	0.7	21
42	MAGNETIC ABRASIVE FINISHING PROCESS – A PARAMETRIC ANALYSIS. Journal of Advanced Manufacturing Systems, 2005, 04, 131-150.	0.4	20
43	Wire Electrochemical Threading: A Technique for Fabricating Macro/Micro Thread Profiles. Journal of the Electrochemical Society, 2018, 165, E397-E405.	1.3	19
44	Analysis of contoured holes produced using STED process. International Journal of Advanced Manufacturing Technology, 2009, 44, 133-148.	1.5	18
45	Investigations into side gap in wire electrochemical micromachining (wire-ECMM). International Journal of Advanced Manufacturing Technology, 2018, 94, 4469-4478.	1.5	18
46	Medium rheological characterization and performance study during rotational abrasive flow finishing (R-AFF) of Al alloy and Al alloy/SiC MMCs. International Journal of Advanced Manufacturing Technology, 2019, 100, 1149-1163.	1.5	18
47	Force analysis of magnetic abrasive nano-finishing of magnetic and non-magnetic materials. International Journal of Advanced Manufacturing Technology, 2019, 100, 1137-1147.	1.5	16
48	Development of inverse replica fixture for nano-finishing of knee joint using R-MRAFF process. Journal of Micromanufacturing, 2019, 2, 35-41.	0.6	15
49	Micromachining: An overview (Part I). Journal of Micromanufacturing, 2020, 3, 142-158.	0.6	14
50	Micro-texturing on flat and cylindrical surfaces using electric discharge micromachining. Journal of Micromanufacturing, 2021, 4, 127-137.	0.6	14
51	Investigations into insertion force of electrochemically micro-textured hypodermic needles. International Journal of Advanced Manufacturing Technology, 2019, 100, 1311-1326.	1.5	13
52	Optimization of process parameters in nano-finishing of Co-Cr-Mo alloy knee joint. Materials and Manufacturing Processes, 2020, 35, 985-992.	2.7	13
53	On-Line Monitoring of Tool Wear and Control of Dimensional Inaccuracy in Turning. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2001, 123, 10-12.	1.3	12
54	Theoretical Analysis of Thermal Stresses in Electro-discharge Diamond Grinding. Machining Science and Technology, 2004, 8, 119-140.	1.4	11

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55	Fabrication of complex circuit on printed circuit board (PCB) using electrochemical micro-machining. International Journal of Advanced Manufacturing Technology, 2016, 85, 2073-2081.	1.5	10
56	Analysis, design and synthesis of water-based magnetorheological fluid for CMMRF process. Journal of Micromanufacturing, 2018, 1, 45-52.	0.6	10
57	Experimental and analytical investigations into wire electrochemical micro turning. Journal of Micromanufacturing, 2019, 2, 42-58.	0.6	10
58	Analysis of magnetic abrasive finishing with slotted magnetic pole. AIP Conference Proceedings, 2004, , .	0.3	9
59	Sustainable Electrochemical Micromachining Using Atomized Electrolyte Flushing. Journal of the Electrochemical Society, 2021, 168, 043504.	1.3	9
60	Parametric Study of Temperature Distribution in Electrodischarge Diamond Grinding. Materials and Manufacturing Processes, 2004, 19, 1071-1101.	2.7	8
61	Real-time experimental study and numerical simulation of phase change material during the discharge stage: Thermo-fluidic behavior, solidification morphology, and energy content. Energy Storage, 2019, 1, e51.	2.3	8
62	Investigations into the effect of cathode material on temperature distribution during electrochemical machining. International Journal of Production Research, 1986, 24, 439-450.	4.9	7
63	Effects of Accelerated Tests on Shear Flow Stress in Machining. Journal of Engineering for Industry, 1987, 109, 206-212.	0.8	7
64	3-D fabrication using electrical discharge-milling: an overview. Materials and Manufacturing Processes, 2022, 37, 1215-1245.	2.7	7
65	Micro-electrical Discharge Milling Operation. Materials Forming, Machining and Tribology, 2019, , 23-51.	0.7	6
66	On the production of elliptical holes by ECM. International Journal of Production Research, 1987, 25, 433-445.	4.9	5
67	Micro-machining: An overview (Part II). Journal of Micromanufacturing, 2022, 5, 46-73.	0.6	5
68	Characterization of shearing features for sheet metal components in 2-D layout. International Journal of Production Research, 1996, 34, 157-190.	4.9	4
69	Simultaneous microchannel formation and copper deposition on silicon along with surface treatment. , 2010, , .		4
70	Editorial: Micromachining. International Journal of Advanced Manufacturing Technology, 2012, 61, 1173-1174.	1.5	3
71	MEASUREMENT OF HYDROGEN CONTENT IN ELECTRICAL DISCHARGE MACHINED COMPONENTS. Machining Science and Technology, 2005, 9, 289-299.	1.4	2
72	Traveling down the microchannels: Fabrication and analysis. , 2010, , .		2

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73	Editorial to 1st International & 22nd AIMTDR. International Journal of Advanced Manufacturing Technology, 2008, 38, 489-490.	1.5	0
74	Fabrication of Micro-holes Array Through Multiple Electrodes with Distributed $\text{TiO}_2$ -Pulsed Electrochemical Machining. Lecture Notes on Multidisciplinary Industrial Engineering, 2019, , 47-60.	0.4	0