Qinghua Song

List of Publications by Year
in descending order

125 papers	3,000 citations	136885 32 h-index	206029 48 g-index
128 all docs	128 docs citations	128 times ranked	1671 citing authors

#	Article	IF	Citations
1	Wear behavior of textured tools under graphene-assisted minimum quantity lubrication system in machining Ti-6Al-4V alloy. Tribology International, 2020, 145, 106183.	3.0	120
2	Advancements in material removal mechanism and surface integrity of high speed metal cutting: A review. International Journal of Machine Tools and Manufacture, 2021, 166, 103744.	6.2	119
3	Experimental characterisation of the performance of hybrid cryo-lubrication assisted turning of Tiâ€“6Alâ€“4V alloy. Tribology International, 2021, 153, 106582.	3.0	102
4	Evolutions of grain size and micro-hardness during chip formation and machined surface generation for Ti-6Al-4V in high-speed machining. International Journal of Advanced Manufacturing Technology, 2016, 82, 1725-1736.	1.5	87
5	Energy-based cost integrated modelling and sustainability assessment of Al-GnP hybrid nanofluid assisted turning of AISI52100 steel. Journal of Cleaner Production, 2020, 257, 120502.	4.6	87
6	Performance Evaluation of Vegetable Oil-Based Nano-Cutting Fluids in Environmentally Friendly Machining of Inconel-800 Alloy. Materials, 2019, 12, 2792.	1.3	84
7	Realization of Low Latent Heat of a Solar Evaporator via Regulating the Water State in Wood Channels. ACS Applied Materials & Interfaces, 2020, 12, 18504-18511.	4.0	83
8	Proper selection of cutting parameters and cutting tool angle to lower the specific cutting energy during high speed machining of 7050-T7451 aluminum alloy. Journal of Cleaner Production, 2016, 129, 292-304.	4.6	80
9	Tool wear and hole quality evaluation in cryogenic Drilling of Inconel 718 superalloy. Tribology International, 2020, 143, 106084.	3.0	80
10	Environment and economic burden of sustainable cooling/lubrication methods in machining of Inconel-800. Journal of Cleaner Production, 2021, 287, 125074.	4.6	77
11	Prediction of simultaneous dynamic stability limit of timeâ€“variable parameters system in thin-walled workpiece high-speed milling processes. International Journal of Advanced Manufacturing Technology, 2011, 55, 883-889.	1.5	73
12	Investigations of critical cutting speed and ductile-to-brittle transition mechanism for workpiece material in ultra-high speed machining. International Journal of Mechanical Sciences, 2015, 104, 44-59.	3.6	70
13	Machining characteristics based life cycle assessment in eco-benign turning of pure titanium alloy. Journal of Cleaner Production, 2020, 251, 119598.	4.6	69
14	Application of Shermanâ€“Morrisonâ€“Woodbury formulas in instantaneous dynamic of peripheral milling for thin-walled component. International Journal of Mechanical Sciences, 2015, 96-97, 79-90.	3.6	62
15	Recent progress of machinability and surface integrity for mechanical machining Inconel 718: a review. International Journal of Advanced Manufacturing Technology, 2020, 109, 215-245.	1.5	61
16	Machinability investigations of hardened steel with biodegradable oil-based MQL spray system. International Journal of Advanced Manufacturing Technology, 2020, 108, 735-748.	1.5	56
17	A review on conventional and advanced minimum quantity lubrication approaches on performance measures of grinding process. International Journal of Advanced Manufacturing Technology, 2021, 117, 729-750.	1.5	55
18	Microstructure and machinability evaluation in micro milling of selective laser melted Inconel 718 alloy. Journal of Materials Research and Technology, 2021, 14, 348-362.	2.6	52

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19	Development of constrained layer damping toolholder to improve chatter stability in end milling. International Journal of Mechanical Sciences, 2016, 117, 299-308.	3.6	50
20	Tribological performance based machinability investigations in cryogenic cooling assisted turning of Î±-Î² titanium Alloy. Tribology International, 2021, 160, 107032.	3.0	49
21	Impact of layer rotation on micro-structure, grain size, surface integrity and mechanical behaviour of SLM Al-Si-10Mg alloy. Journal of Materials Research and Technology, 2020, 9, 9506-9522.	2.6	48
22	Artificial Intelligence-Based Hole Quality Prediction in Micro-Drilling Using Multiple Sensors. Sensors, 2020, 20, 885.	2.1	48
23	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.	3.1	47
24	Tribological behavior of textured tools in sustainable turning of nickel based super alloy. Tribology International, 2021, 155, 106775.	3.0	44
25	Prediction of chatter stability in high-speed finishing end milling considering multi-mode dynamics. Journal of Materials Processing Technology, 2009, 209, 2585-2591.	3.1	43
26	Ecological, economical and technological perspectives based sustainability assessment in hybrid-cooling assisted machining of Ti-6Al-4ÂV alloy. Sustainable Materials and Technologies, 2020, 26, e00218.	1.7	43
27	Sustainability and machinability improvement of Nimonic-90 using indigenously developed green hybrid machining technology. Journal of Cleaner Production, 2020, 263, 121402.	4.6	43
28	Milling of Tiâ€“6Alâ€“4V under hybrid Al2O3-MWCNT nanofluids considering energy consumption, surface quality, and tool wear: a sustainable machining. International Journal of Advanced Manufacturing Technology, 2020, 107, 4141-4157.	1.5	42
29	Progress for sustainability in the mist assisted cooling techniques: a critical review. International Journal of Advanced Manufacturing Technology, 2020, 109, 345-376.	1.5	41
30	Design for variable pitch end mills with high milling stability. International Journal of Advanced Manufacturing Technology, 2011, 55, 891-903.	1.5	40
31	Boring bar with constrained layer damper for improving process stability. International Journal of Advanced Manufacturing Technology, 2016, 83, 1951-1966.	1.5	39
32	Dynamic analysis of rectangular thin plates of arbitrary boundary conditions under moving loads. International Journal of Mechanical Sciences, 2016, 117, 16-29.	3.6	36
33	A novel stability prediction approach for thin-walled component milling considering material removing process. Chinese Journal of Aeronautics, 2017, 30, 1789-1798.	2.8	34
34	Optimization of Power Consumption Associated with Surface Roughness in Ultrasonic Assisted Turning of Nimonic-90 Using Hybrid Particle Swarm-Simplex Method. Materials, 2019, 12, 3418.	1.3	34
35	Vibration analysis of functionally graded plate with a moving mass. Applied Mathematical Modelling, 2017, 46, 141-160.	2.2	33
36	A time-space discretization method in milling stability prediction of thin-walled component. International Journal of Advanced Manufacturing Technology, 2017, 89, 2675-2689.	1.5	30

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37	Multi-condition identification in milling Ti-6Al-4V thin-walled parts based on sensor fusion. Mechanical Systems and Signal Processing, 2022, 164, 108264.	4.4	30
38	Chatter detection and stability region acquisition in thin-walled workpiece milling based on CMWT. International Journal of Advanced Manufacturing Technology, 2018, 98, 699-713.	1.5	29
39	Prediction of residual stress with multi-physics model for orthogonal cutting Ti-6Al-4V under various tool wear morphologies. Journal of Materials Processing Technology, 2021, 288, 116908.	3.1	29
40	An Approach for Reducing Cutting Energy Consumption with Ultra-High Speed Machining of Super Alloy Inconel 718. International Journal of Precision Engineering and Manufacturing - Green Technology, 2020, 7, 35-51.	2.7	28
41	Subdivision of chatter-free regions and optimal cutting parameters based on vibration frequencies for peripheral milling process. International Journal of Mechanical Sciences, 2014, 83, 172-183.	3.6	27
42	A Modified Johnsonâ€“Cook Constitutive Model and Its Application to High Speed Machining of 7050-T7451 Aluminum Alloy. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2019, 141, .	1.3	25
43	Effect of wall roughness on performance of microchannel applied in microfluidic device. Microsystem Technologies, 2019, 25, 2385-2397.	1.2	25
44	Longitudinal amplitude effect on material removal mechanism of ultrasonic vibration-assisted milling 2.5D C/SiC composites. Ceramics International, 2021, 47, 32144-32152.	2.3	25
45	Analysis and implementation of chatter frequency dependent constrained layer damping tool holder for stability improvement in turning process. Journal of Materials Processing Technology, 2019, 266, 687-695.	3.1	24
46	Chatter stability for micromilling processes with flat end mill. International Journal of Advanced Manufacturing Technology, 2014, 71, 1159-1174.	1.5	23
47	Formulating a numerically low-cost method of a constrained layer damper for vibration suppression in thin-walled component milling and experimental validation. International Journal of Mechanical Sciences, 2017, 128-129, 294-311.	3.6	21
48	A generalized cutting force model for five-axis milling processes. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2019, 233, 3-17.	1.5	20
49	Development of a toolholder with high dynamic stiffness for mitigating chatter and improving machining efficiency in face milling. Mechanical Systems and Signal Processing, 2020, 145, 106928.	4.4	20
50	Comprehensive analysis on orthopedic drilling: A state-of-the-art review. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2020, 234, 537-561.	1.0	20
51	Abrasive Wear Behavior of Cryogenically Treated Boron Steel (30MnCrB4) Used for Rotavator Blades. Materials, 2020, 13, 436.	1.3	20
52	A solid-analytical-based method for extracting cutter-workpiece engagement in sculptured surface milling. International Journal of Advanced Manufacturing Technology, 2015, 80, 1297-1310.	1.5	19
53	Parametric study of dynamic response of sandwich plate under moving loads. Thin-Walled Structures, 2018, 123, 82-99.	2.7	19
54	Vibration suppression of thin-walled workpiece milling using a time-space varying PD control method via piezoelectric actuator. International Journal of Advanced Manufacturing Technology, 2019, 105, 2843-2856.	1.5	19

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55	Surface Characterization and Tribological Performance of Anodizing Micro-Textured Aluminum-Silicon Alloys. Materials, 2019, 12, 1862.	1.3	19
56	A Novel Unsupervised Machine Learning-Based Method for Chatter Detection in the Milling of Thin-Walled Parts. Sensors, 2021, 21, 5779.	2.1	19
57	Effects of Al content in TiAlN coatings on tool wear and cutting temperature during dry machining IN718. Tribology International, 2022, 171, 107540.	3.0	18
58	Fluid mechanics of internal flow with friction and cutting strategies for micronozzles. International Journal of Mechanical Sciences, 2015, 100, 41-49.	3.6	16
59	Dynamic model and stability prediction of thin-walled component milling with multi-modes coupling effect. Journal of Materials Processing Technology, 2021, 288, 116869.	3.1	16
60	Optimization of machining parameters for micro-machining nozzle based on characteristics of surface roughness. International Journal of Advanced Manufacturing Technology, 2015, 80, 1403-1410.	1.5	15
61	Influence of machined surface roughness on thrust performance of micro-nozzle manufactured by micro-milling. Experimental Thermal and Fluid Science, 2016, 77, 295-305.	1.5	15
62	Hydrodynamic lubrication analysis of two-dimensional section between piston skirt and textured cylinder wall considering slip boundary conditions. Tribology International, 2019, 140, 105879.	3.0	15
63	A pseudorandom based crystal plasticity finite element method for grain scale polycrystalline material modeling. Mechanics of Materials, 2020, 144, 103347.	1.7	14
64	Coating-thickness-dependent physical properties and cutting temperature for cutting Inconel 718 with TiAlN coated tools. Journal of Advanced Research, 2022, 38, 191-199.	4.4	14
65	Study on the heat transfer reinforcement of glass fiber/epoxy resin composites by grafting and dispersing graphene oxide. Composites Science and Technology, 2021, 216, 109039.	3.8	14
66	Tool wear induced modifications of plastic flow and deformed material depth in new generated surfaces during turning Ti-6Al-4V. Journal of Materials Research and Technology, 2020, 9, 10782-10795.	2.6	13
67	Dynamic Deformation of Thin-walled Plate with Variable Thickness under Moving Milling Force. Procedia CIRP, 2017, 58, 311-316.	1.0	12
68	Impact of Cryogenic Treatment on HCF and FCP Performance of Î²-Solution Treated Ti-6Al-4V ELI Biomaterial. Materials, 2020, 13, 500.	1.3	11
69	Thermal conductivity and anti-corrosion of epoxy resin based composite coatings doped with graphene and graphene oxide. Composites Part C: Open Access, 2021, 5, 100124.	1.5	10
70	Partial Surface Damper to Suppress Vibration for Thin Walled Plate Milling. Chinese Journal of Mechanical Engineering (English Edition), 2017, 30, 632-643.	1.9	9
71	Influence of a Biocompatible Hydrophilic Needle Surface Coating on a Puncture Biopsy Process for Biomedical Applications. Coatings, 2020, 10, 178.	1.2	9
72	Active vibration control of thin-walled milling based on ANFIS parameter optimization. International Journal of Advanced Manufacturing Technology, 2021, 114, 563-577.	1.5	9

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73	Optimizing amplitude to improve machined surface quality in longitudinal ultrasonic vibration-assisted side milling 2.5D C/SiC composites. Composite Structures, 2022, 297, 115963.	3.1	9
74	Precise chatter monitoring of thin-walled component milling process based on parametric time-frequency transform method. Journal of Materials Processing Technology, 2020, 283, 116712.	3.1	8
75	Position-Dependent Stability Prediction for Multi-Axis Milling of the Thin-Walled Component with a Curved Surface. Applied Sciences (Switzerland), 2020, 10, 8779.	1.3	7
76	Needle deformation in the process of puncture surgery: experiment and simulation. Procedia CIRP, 2020, 89, 270-276.	1.0	7
77	Multi-Perspective Analysis of Building Orientation Effects on Microstructure, Mechanical and Surface Properties of SLM Ti6Al4V with Specific Geometry. Materials, 2021, 14, 4392.	1.3	7
78	Dual-phase morphology distribution effects on mechanical behaviors of Ti6Al4V via pseudorandom crystal plasticity modeling. Journal of Materials Research and Technology, 2022, 17, 2897-2912.	2.6	7
79	Residual surface topology modeling and simulation analysis for micro-machined nozzle. International Journal of Precision Engineering and Manufacturing, 2015, 16, 157-162.	1.1	6
80	Cutting characteristics of porcine tenderloin tissue along tangential direction of surface. International Journal of Advanced Manufacturing Technology, 2018, 98, 17-27.	1.5	6
81	Stability of turning process with a distributed cutting force model. International Journal of Advanced Manufacturing Technology, 2019, 102, 1215-1225.	1.5	6
82	Size-dependent responses of micro-end mill based on strain gradient elasticity theory. International Journal of Advanced Manufacturing Technology, 2019, 100, 1839-1854.	1.5	6
83	Chatter suppression in large overhang face milling using a toolholder with high dynamic performance. International Journal of Advanced Manufacturing Technology, 2020, 108, 1713-1724.	1.5	6
84	Optimization of thermal and hydrophobic properties of GO-doped epoxy nanocomposite coatings. Nanotechnology Reviews, 2021, 10, 1236-1252.	2.6	6
85	Prediction of micro milling force and surface roughness considering size-dependent vibration of micro-end mill. International Journal of Advanced Manufacturing Technology, 2022, 119, 5807-5820.	1.5	6
86	Effects of sidewall roughness on mixing performance of zigzag microchannels. Chemical Engineering and Processing: Process Intensification, 2022, 179, 109057.	1.8	6
87	An improved numerical integration method to predict the milling stability based on the Lagrange interpolation scheme. International Journal of Advanced Manufacturing Technology, 2021, 116, 2111-2123.	1.5	5
88	Geometry-considered 3D pseudorandom grain-scale modelling for crystalline material miniature parts. Materials and Design, 2021, 210, 110054.	3.3	5
89	Milling stability prediction based on the hybrid interpolation scheme of the Newton and Lagrange polynomials. International Journal of Advanced Manufacturing Technology, 2021, 112, 1501-1512.	1.5	5
90	Evaluation and prediction of pore effects on single-crystal mechanical and damage properties of selective laser melted Inconel-718. Materials and Design, 2022, 219, 110807.	3.3	5

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91	Instability of internal damping due to collet chuck holder for rotating spindleâ€“holderâ€“tool system. Mechanism and Machine Theory, 2016, 101, 95-115.	2.7	4
92	Optimum end milling tool path and machining parameters for micro Laval nozzle manufacturing. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2017, 231, 1703-1712.	1.5	4
93	Numerical prediction and experimental investigation of residual stresses in sequential milling of GH4169 considering initial stress effect. International Journal of Advanced Manufacturing Technology, 2022, 119, 7215-7228.	1.5	4
94	Stability Prediction during Thin-Walled Workpiece High-Speed Milling. Advanced Materials Research, 0, 69-70, 428-432.	0.3	3
95	Influence of Chatter on Machining Distortion for Thin-Walled Component Peripheral Milling. Advances in Mechanical Engineering, 2014, 6, 329564.	0.8	3
96	Dynamic Response and Parametric Analysis of Geometrically Nonlinear Functionally Graded Plate With Arbitrary Constraints Under Moving Mass. IEEE Access, 2018, 6, 51151-51173.	2.6	3
97	Theoretical Modeling and Analysis of Directional Spectrum Emissivity and Its Pattern for Random Rough Surfaces with a Matrix Method. Symmetry, 2021, 13, 1733.	1.1	3
98	Development of Tool Wear Standards and Wear Mechanism for Micro Milling Ti-6Al-4V Alloy. Metals, 2022, 12, 726.	1.0	3
99	3D Cohesive Finite Element Minimum Invasive Surgery Simulation Based on Kelvin-Voigt Model. Chinese Journal of Mechanical Engineering (English Edition), 2022, 35, .	1.9	3
100	On the segmentation-driven vibration in milling titanium alloy. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2018, 232, 1508-1522.	1.5	2
101	Comparison of Disturbance Compensators for a Discrete-Time System with Parameter Uncertainty. Applied Sciences (Switzerland), 2020, 10, 6219.	1.3	2
102	Effects of Sequential Operation with Heat Treatment and Mechanical Milling on Work Hardening for Superalloy GH4169. Metals, 2021, 11, 1367.	1.0	2
103	Analytical prediction of transient and steady cutting temperature distributions in coated tools under time-varied heat sources. International Journal of Advanced Manufacturing Technology, 2021, 117, 1117-1132.	1.5	2
104	Updated Tool Path Model Including Rotating Speed for Cutting Force Prediction in High-Speed Milling. Advanced Science Letters, 2012, 15, 451-455.	0.2	2
105	The Fabrication of Porous Metal-Bonded Diamond Coatings Based on Low-Pressure Cold Spraying and Ni-Al Diffusion-Reaction. Materials, 2022, 15, 2234.	1.3	2
106	Heat transfer enhancement with surface-active thermal conductive media coating during orthogonal cutting Inconel 718. International Journal of Advanced Manufacturing Technology, 2022, 120, 5823-5833.	1.5	2
107	An investigation on thermo-mechanical performance of graphene-oxide-reinforced shape memory polymer. Nanotechnology Reviews, 2022, 11, 2349-2365.	2.6	2
108	Identification of Stability Lobes in High-Speed Milling Flexible Parts with Bull-Nose End Mills. Key Engineering Materials, 0, 443, 297-301.	0.4	1

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109	Design and Application of High-Speed Variable Pitch End Mill Based on Milling Stability. Advanced Materials Research, 0, 314-316, 599-602.	0.3	1
110	Subdivision of Machining Stable Region Based on Vibration Frequencies. Advanced Materials Research, 2011, 291-294, 1921-1924.	0.3	1
111	The Bionic Vibration Damping Technology and its Inspiration for the High Speed Milling Cutter. Applied Mechanics and Materials, 0, 226-228, 98-101.	0.2	1
112	Influence of rotational damping on stability in end milling processes. International Journal of Advanced Manufacturing Technology, 2018, 99, 1891-1901.	1.5	1
113	Influence of Biocompatible Hydrophilic Coated Needle on Puncture Process through a Simulation Method. Procedia CIRP, 2020, 89, 214-221.	1.0	1
114	Constrained layer damping treatment of a model support sting. Chinese Journal of Aeronautics, 2021, 34, 58-64.	2.8	1
115	Dynamic Response Analysis of a Thin Plate with Partially Constrained Layer Damping Optimization under Moving Loads for Various Boundary Conditions. Applied Sciences (Switzerland), 2021, 11, 3282.	1.3	1
116	Three-dimensional Modeling and Simulation of Muscle Tissue Puncture Process. Chinese Journal of Mechanical Engineering (English Edition), 2022, 35, .	1.9	1
117	Predicting the Effect of Vibration on Machining Distortion in High-Speed Milling Aerospace Monolithic Components. , 2010, , .		0
118	Optimal Cutting Parameters for Precision Machining Process. Key Engineering Materials, 2010, 431-432, 381-384.	0.4	0
119	Prediction of Temperature Distribution in High-Speed End Mill Assisted by Heat Pipe Cooling. Advanced Materials Research, 2011, 311-313, 2371-2374.	0.3	0
120	Instantaneous Cutting Force Model in High-Speed Milling Process with Gyroscopic Effect. Advanced Materials Research, 0, 314-316, 389-392.	0.3	0
121	Stability of High Speed Milling Based on Instantaneous Cutting Force. Applied Mechanics and Materials, 2012, 152-154, 404-408.	0.2	0
122	Equivalent Profile of High-Speed Mill Considering Gyroscopic Effect. Advanced Materials Research, 0, 443-444, 818-822.	0.3	0
123	Comprehensive Cutting Force Model for Milling Processes with Solid End Mills and Inserted Cutters. Key Engineering Materials, 0, 589-590, 82-87.	0.4	0
124	Dynamic Analysis of Bionic Vibration Isolation Platform Based on Viscoelastic Materials. Advanced Materials Research, 2014, 852, 467-471.	0.3	0
125	Improvement of Milling Stable Processing Condition for a Cutter With Large Ratio of Length to Diameter. IEEE Access, 2020, 8, 200420-200429.	2.6	0