Ahmad Barari

List of Publications by Year
in descending order

106 papers	1,078 citations	331670 21 h-index	501196 28 g-index
106 all docs	106 docs citations	106 times ranked	566 citing authors

#	Article	IF	Citations
1	Experimental and analytical evaluation of tool path error using computer integrated nonlinear kinematical modeling for a 4DOF parallel milling machine. International Journal of Computer Integrated Manufacturing, 2022, 35, 527-555.	4.6	2
2	Computer integrated work-space quality improvement of the C4 parallel robot CMM based on kinematic error model for using in intelligent measuring. International Journal of Computer Integrated Manufacturing, 2022, 35, 444-461.	4.6	7
3	Cross-sensitivity control in a novel four-component milling dynamometer for simultaneous measurement of tri-axial forces and torque. Measurement: Journal of the International Measurement Confederation, 2022, 191, 110788.	5.0	6
4	Data Analytics for Noise Reduction in Optical Metrology of Reflective Planar Surfaces. Machines, 2022, 10, 25.	2.2	4
5	Employing LIVE Digital Twin in Prognostic and Health Management: Identifying Location of the Sensors. IFAC-PapersOnLine, 2022, 55, 138-143.	0.9	8
6	Transition towards Smart Factories. International Journal of Computer Integrated Manufacturing, 2022, 35, 341-344.	4.6	7
7	Learning phase in a LIVE Digital Twin for predictive maintenance. Autonomous Intelligent Systems, 2022, 2, .	3.1	3
8	Tolerance analysis based on Monte Carlo simulation: a case of an automotive water pump design optimization. Journal of Intelligent Manufacturing, 2021, 32, 1883-1897.	7.3	4
9	Heavy Vehicles Brake Drums â€" An Accurate Evaluation on Thermal Loads in Severe Service Conditions. International Journal of Automotive Technology, 2021, 22, 371-382.	1.4	4
10	Editorial: intelligent manufacturing systems towards industry 4.0 era. Journal of Intelligent Manufacturing, 2021, 32, 1793-1796.	7.3	35
11	Smart Topology Optimization Using Adaptive Neighborhood Simulated Annealing. Applied Sciences (Switzerland), 2021, 11, 5257.	2.5	15
12	Adaptive variable layer thickness and perimetral offset planning for layer-based additive manufacturing processes. International Journal of Computer Integrated Manufacturing, 2021, 34, 964-974.	4.6	16
13	Topology Optimization and Microfabrication Constraints. , 2021, , .		3
14	Fighting COVID: An Autonomous Indoor Cleaning Robot (AICR) Supported by Artificial Intelligence and Vision for Dynamic Air Disinfection. , 2021, , .		6
15	Improving 3D Printing Geometric Accuracy Using Design of Experiments on Process Parameters in Fused Filament Fabrication (FFF). , 2021, , .		4
16	Neural Network Signal Processing in Spark Assisted Chemical Engraving (SACE) Micromachining. , 2021, , .		1
17	Autonomous Snowblower Utilizing Internet of Things for Minimal Power Consumption. , 2021, , .		2
18	Multi-objective Topology Optimization Using Simulated Annealing Method. Advances in Intelligent Systems and Computing, 2021, , 343-353.	0.6	6

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19	Properties of Metal Extrusion Additive Manufacturing and Its Application in Digital Supply Chain Management. IFAC-PapersOnLine, 2021, 54, 199-204.	0.9	2
20	Improving Geometric Tolerances in 3D Printable Pneumatic Valves Designed for Respiratory Mechanical Ventilators Amid Covid-19 Pandemic. IFAC-PapersOnLine, 2021, 54, 1053-1058.	0.9	1
21	Topological Optimization and Simulated Annealing. IFAC-PapersOnLine, 2021, 54, 205-210.	0.9	3
22	Numerical Versus Analytical Direct Kinematics in a Novel 4-DOF Parallel Robot Designed for Digital Metrology. IFAC-PapersOnLine, 2021, 54, 181-186.	0.9	4
23	LIVE Digital Twin for Smart Maintenance in Structural Systems. IFAC-PapersOnLine, 2021, 54, 1047-1052.	0.9	12
24	Reducing Noises in Digital Surface Inspection Using a Data Clustering Approach. IFAC-PapersOnLine, 2021, 54, 193-198.	0.9	2
25	Post-Processing of non gradient-based Topology Optimization with Simulated Annealing. IFAC-PapersOnLine, 2021, 54, 755-760.	0.9	6
26	Preliminary Design and Development of a Mechanical Ventilator Using Industrial Automation Components for Rapid Deployment During the COVID-19 Pandemic. Cureus, 2021, 13, e20386.	0.5	2
27	Using Feedback Strategies in Simulated Annealing with Crystallization Heuristic and Applications. Applied Sciences (Switzerland), 2021, 11, 11814.	2.5	2
28	Detection of Defected Zone Using 3D Scanning Data to Repair Worn Turbine Blades. IFAC-PapersOnLine, 2020, 53, 10531-10535.	0.9	3
29	Producing High Precision Additive Manufacturing Parts by Direct Printing of NURBS Surfaces. , 2020, , .		4
30	The Importance of Personal Protective Equipment Design and Donning and Doffing Technique in Mitigating Infectious Disease Spread: A Technical Report. Cureus, 2020, 12, e12084.	0.5	13
31	Effect of Direct Slicing on Precision Additive Manufacturing. IFAC-PapersOnLine, 2020, 53, 11982-11987.	0.9	2
32	3D Printable Pneumatic Valves for Rapidly Manufacturable Mechanical Ventilator Amid Covid-19 Outbreak. , 2020, , .		3
33	Design and development of a novel 4-DOF parallel kinematic coordinate measuring machine (CMM). International Journal of Computer Integrated Manufacturing, 2019, 32, 750-760.	4.6	15
34	Integrated Digital Design and Manufacturing for 3D Printing Technologies. IFAC-PapersOnLine, 2019, 52, 248-253.	0.9	4
35	Customization of Automotive Structural Components using Additive Manufacturing and Topology Optimization. IFAC-PapersOnLine, 2019, 52, 212-217.	0.9	50
36	Intelligent Design Tolerance Allocation for Optimum Adaptability to Manufacturing Using a Monte Carlo Approach. IFAC-PapersOnLine, 2019, 52, 165-170.	0.9	6

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37	An Intelligent Self-Calibrating 4-DOF Parallel Robot for Precise Geometric Data Collection in Digital Manufacturing. IFAC-PapersOnLine, 2019, 52, 323-327.	0.9	5
38	A Digital Twin for Integrated Inspection System in Digital Manufacturing. IFAC-PapersOnLine, 2019, 52, 182-187.	0.9	28
39	Intelligent Process Planning for Additive Manufacturing. IFAC-PapersOnLine, 2019, 52, 218-223.	0.9	11
40	Cyber-Physical System Utilizing Work-Piece Memory in Digital Manufacturing. IFAC-PapersOnLine, 2019, 52, 201-206.	0.9	16
41	Geometric Complexity Estimation of Continuous Surfaces for Fitting Processes. , 2019, , .		2
42	An efficient methodology for slicing NURBS surfaces using multi-step methods. International Journal of Advanced Manufacturing Technology, 2018, 95, 3111-3125.	3.0	26
43	A more accurate analytical formulation of surface roughness in layer-based additive manufacturing to enhance the product's precision. International Journal of Advanced Manufacturing Technology, 2018, 96, 3793-3804.	3.0	32
44	Study of detailed deviation zone considering coordinate metrology uncertainty. Measurement: Journal of the International Measurement Confederation, 2018, 126, 433-457.	5.0	14
45	Surface roughness of FDM parts after post-processing with acetone vapor bath smoothing process. International Journal of Advanced Manufacturing Technology, 2018, 95, 1505-1520.	3.0	53
46	Developing Topology Optimization with Additive Manufacturing Constraints in ANSYS®. IFAC-PapersOnLine, 2018, 51, 1359-1364.	0.9	29
47	Closed-Loop Coordinate Metrology for Hybrid Manufacturing System. IFAC-PapersOnLine, 2018, 51, 752-757.	0.9	6
48	Overhanging Feature Analysis for the Additive Manufacturing of Topology Optimized Structures. , 2018, , .		1
49	Constrained Topology Optimization For Additive Manufacturing Of Structural Components In Ansys®. , 2018, , .		4
50	Developing skin model in coordinate metrology using a finite element method. Measurement: Journal of the International Measurement Confederation, 2017, 109, 149-159.	5.0	25
51	Adaptive data reduction with neighbourhood search approach in coordinate measurement of planar surfaces. Journal of Manufacturing Systems, 2017, 45, 28-47.	13.9	29
52	Post processing for Fused Deposition Modeling Parts with Acetone Vapour Bath. IFAC-PapersOnLine, 2016, 49, 42-48.	0.9	53
53	A quick deviation zone fitting in coordinate metrology of NURBS surfaces using principle component analysis. Measurement: Journal of the International Measurement Confederation, 2016, 92, 352-364.	5.0	30
54	Convergence Study of Genetic Programming Approach to Estimate Surface Integrity on Additive Manufacturing Parts. , 2015, , .		0

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55	Modelling of Cusp Geometry in Additive Manufacturing Parts Using a Piece-Wise Polynomial. , 2015, , .		0
56	Nonlinear Free Vibration of Piezoelectric Functionally Graded Beams in Thermal Environment. , 2015, , .		0
57	A Genetic Programming Approach to Model Detailed Surface Integrity of Additive Manufacturing Parts. IFAC-PapersOnLine, 2015, 48, 2339-2344.	0.9	1
58	Topologically Optimized Diesel Engine Support Manufactured with Additive Manufacturing. IFAC-PapersOnLine, 2015, 48, 2333-2338.	0.9	24
59	A unified approach for nonlinear vibration analysis of curved structures using non-uniform rational B-spline representation. Journal of Sound and Vibration, 2015, 353, 292-307.	3.9	24
60	Evaluation of the Surface Roughness of Additive Manufacturing Parts Based on the Modelling of Cusp Geometry. IFAC-PapersOnLine, 2015, 48, 658-663.	0.9	46
61	Convergence of a finite difference approach for detailed deviation zone estimation in coordinate metrology. Acta IMEKO (2012), 2015, 4, 20.	0.7	8
62	A Finite Element Approach to Estimate the Detailed Deviation Zone in Coordinate Metrology. , 2015, , .		0
63	Handling and safety enhancement of race cars using active aerodynamic systems. Vehicle System Dynamics, 2014, 52, 1171-1190.	3.7	27
64	Surface Topography of Additive Manufacturing Parts Using a Finite Difference Approach. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2014, 136, .	2.2	32
65	An Approach to Estimate the Detailed Deviation Zone in Coordinate Metrology Using Harmonic Function Properties. , 2014, , .		0
66	Using Simple Structural Beam Model to Optimize for Bending Stiffness and Vibration in Automotive Structures. , 2014, , .		0
67	Effect of Adaptive Slicing on Surface Integrity in Additive Manufacturing. , 2014, , .		17
68	Using the Simple Structural Beam (SSB) Model to Optimize and Analyze Automotive Structures for Bending Stiffness and Natural Frequency. , 2014, , .		1
69	Algorithmic iterative sampling in coordinate metrology plan for coordinate metrology using dynamic uncertainty analysis. , 2014, , .		8
70	Nonlinear forced vibration analysis of free-form nanotube conveying fluid. , 2014, , .		0
71	Development of Optimized Preliminary Vehicle Structural Model Using Simple Structural Beams-Frames (SSB) and Sub-Structural Analysis. Computer-Aided Design and Applications, 2014, 11, 544-551.	0.6	1
72	Surface Tribology Study Resulting by Diamond-Like Carbon Coating. , 2014, , .		0

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73	Effect of Diamond-Like-Carbon Coating on 3D Surface Roughness. , 2014, , .		0
74	Inspection of the machined surfaces using manufacturing data. Journal of Manufacturing Systems, 2013, 32, 107-113.	13.9	26
75	Modelling and Analysis of the Effect of Angular Velocity and Acceleration on Brain Strain Field in Traumatic Brain Injury. , 2013, , .		1
76	System and Method for Analysis of Involving Factors in the Demisting Cyclone Efficiency. , 2013, , .		0
77	Characterization of Static Behavior of a Nonlinear Doubly Clamped Microbeam Under Electrostatic Actuation and Detection. , 2013, , .		0
78	Oscillatory Behavior of the Nonlinear Clamped-Free Beam Microgyroscopes Under Electrostatic Actuation and Detection. , 2013, , .		0
79	Static and Dynamic Analysis of a Clamp-Clamp Nano-Beam Under Electrostatic Actuation and Detection Considering Intermolecular Forces. , 2013, , .		0
80	Analysis of nonlinear oscillation of circular curved carbon nanotube. , 2013, , .		2
81	Optimization of Vehicle Structure Considering Torsion Stiffness Using Simple Structural Beam Frame-Approach. Computer-Aided Design and Applications, 2013, 10, 413-426.	0.6	6
82	Tolerance allocation Based on the Minimum Deformation Zone of Finite Element Structural Frame Analysis. Computer-Aided Design and Applications, 2013, 10, 629-641.	0.6	3
83	Study of the Effect of Coating Parameters and Substrates on 3D Surface Roughness in Diamond-Like-Carbon Coating Process. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 1861-1866.	0.4	6
84	Active Aerodynamic System to Improve the Safety and Handling of Race Cars in Lane Change and Wet Road Maneuvers. , 2012, , .		1
85	Analysis and Optimization of Automotive Structure's Bending Stiffness Using Beam Elements. , 2012, , .		2
86	Profile Tolerance Allocation for Rapid Prototyping of Sculptured Surfaces in a Direct Slicing Process. , 2012, , .		6
87	Development of a DSM-Based Methodology in an Academic Setting. Journal of Mechanical Design, Transactions of the ASME, 2012, 134, .	2.9	9
88	Tolerance Allocation for Structures Subject to Various Loading Events. , 2012, , .		1
89	ESTIMATION OF DETAILED DEVIATION ZONE OF INSPECTED SURFACES. Series on Advances in Mathematics for Applied Sciences, 2012, , 18-26.	0.1	3
90	Automotive body inspection uncertainty associated with computational processes. International Journal of Vehicle Design, 2011, 57, 230.	0.3	12

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91	Evaluation of Deviation Zone Based on Maximum Conformance to Tolerances. , 2011, , .		0
92	Comparison of Numerical Methods for Determining Torsion Stiffness of Automotive Chassis. , 2011, , .		0
93	Nonlinear Vibration Analysis of a Micro Beam Exposed to an External Flow. , 2011, , .		1
94	Analytical Approach to Vibration Analysis of a Pendulum Wrapping on a Cylinder. , 2011, , .		0
95	Deformation and Stress Analysis of the Fullerene by Super Element. , 2011, , .		0
96	Down Force Control of the Low Velocity Racing Car Using Active Aerodynamic Inverse Wings. , 2011, , .		2
97	Methods to Determine Torsion Stiffness in an Automotive Chassis. Computer-Aided Design and Applications, 2011, 8, 67-75.	0.6	17
98	Introducing Design Rigidity to Model Unexpected Disturbances in a DSM-Based Design Process. , 2010, , .		4
99	NURBS representation of estimated surfaces resulting from machining errors. International Journal of Computer Integrated Manufacturing, 2009, 22, 395-410.	4.6	42
100	Reducing rigidity by implementing closed-loop engineering in adaptable design and manufacturing systems. Journal of Manufacturing Systems, 2009, 28, 47-54.	13.9	25
101	Design for Manufacturing of Sculptured Surfaces: A Computational Platform. Journal of Computing and Information Science in Engineering, 2009, 9, .	2.7	11
102	Search-Guided Sampling to Reduce Uncertainty of Minimum Deviation Zone Estimation. Journal of Computing and Information Science in Engineering, 2007, 7, 360-371.	2.7	24
103	Manufacturing-driven Design of Sculptured Surfaces. , 2006, , 523-534.		1
104	Integrated Inspection and Machining for Maximum Conformance to Design Tolerances. CIRP Annals - Manufacturing Technology, 2004, 53, 411-416.	3.6	48
105	Finding optimal correspondence sets for large digital metrology point clouds using anisotropic diffusion analogy. International Journal of Computer Integrated Manufacturing, 0, , 1-21.	4.6	2
106	Versatility of Simulated Annealing with Crystallization Heuristic: Its Application to a Great Assortment of Problems. , 0, , .		3