

Rafiq Ahmad

List of Publications by Year in descending order

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Version: 2024-02-01

107
papers

1,526
citations

361045

20
h-index

395343

33
g-index

110
all docs

110
docs citations

110
times ranked

968
citing authors

#	ARTICLE	IF	CITATIONS
1	Topology optimization of the vibrating structure for fused deposition modelling of parts considering a hybrid deposition path pattern. <i>International Journal of Computer Integrated Manufacturing</i> , 2023, 36, 1379-1396.	2.9	3
2	The integrated process planning and scheduling of flexible job-shop-type remanufacturing systems using improved artificial bee colony algorithm. <i>Journal of Intelligent Manufacturing</i> , 2023, 34, 2963-2988.	4.4	9
3	Integrating lean production strategies, virtual reality technique and building information modeling method for mass customization in cabinet manufacturing. <i>Engineering, Construction and Architectural Management</i> , 2022, 29, 3970-3996.	1.8	5
4	Design, validation, and application of a hybrid shape memory alloy-magnetorheological fluid-based core bracing system under tension and compression. <i>Structures</i> , 2022, 35, 1151-1161.	1.7	16
5	Feature-based modeling for industrial processes in the context of digital twins: A case study of HVOF process. <i>Advanced Engineering Informatics</i> , 2022, 51, 101486.	4.0	7
6	Vision-based automated waste audits: a use case from the window manufacturing industry. <i>International Journal of Advanced Manufacturing Technology</i> , 2022, 119, 7735-7749.	1.5	5
7	A cyber-physical system approach to zero-defect manufacturing in light-gauge steel frame assemblies. <i>Procedia Computer Science</i> , 2022, 200, 924-933.	1.2	8
8	How to adapt lean practices in SMEs to support Industry 4.0 in manufacturing. <i>Procedia Computer Science</i> , 2022, 200, 934-943.	1.2	18
9	Teaching machines to optimizing machining parameters: using independent fuzzy logic controller and image data. <i>SN Applied Sciences</i> , 2022, 4, 107.	1.5	0
10	Increasing the operating depth of a Teflon underwater vehicle using a magnetic field. <i>Ocean Engineering</i> , 2022, 250, 111078.	1.9	1
11	The digitization of agricultural industry – a systematic literature review on agriculture 4.0. <i>Smart Agricultural Technology</i> , 2022, 2, 100042.	3.1	107
12	An ontology model to represent aquaponics 4.0 system's knowledge. <i>Information Processing in Agriculture</i> , 2022, 9, 514-532.	2.9	10
13	Automated Stacker Cranes: A Two-Step Storage Reallocation Process for Enhanced Service Efficiency. <i>Processes</i> , 2022, 10, 2.	1.3	4
14	Increasing Throughput in Warehouses: The Effect of Storage Reallocation and the Location of Input/Output Station. <i>Sustainability</i> , 2022, 14, 4611.	1.6	3
15	Scientometric analysis and critical review of fused deposition modeling in the plastic recycling context. , 2022, 2, 100008.		5
16	An Intelligent Manufacturing Approach Based on a Novel Deep Learning Method for Automatic Machine and Working Status Recognition. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 5697.	1.3	3
17	Numerical Simulation and Optimization of Microwave Heating Effect on Coal Seam Permeability Enhancement. <i>Technologies</i> , 2022, 10, 70.	3.0	3
18	An efficient tool-path planning approach for repair of cylindrical components via laser cladding. <i>Journal of Remanufacturing</i> , 2021, 11, 137-146.	1.6	7

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19	A decision support system to define, evaluate, and guide the lean assessment and implementation at the shop floor level. <i>International Journal of Manufacturing Research</i> , 2021, 16, 1.	0.1	0
20	An Automated Intelligent Feature-based Maintenance Plan Generation Method. <i>Computer-Aided Design and Applications</i> , 2021, 18, 1373-1389.	0.4	1
21	A Novel Deep Learning-based Automatic Damage Detection and Localization Method for Remanufacturing/Repair. <i>Computer-Aided Design and Applications</i> , 2021, 18, 1359-1372.	0.4	8
22	Application of Exact and Multi-Heuristic Approaches to a Sustainable Closed Loop Supply Chain Network Design. <i>Sustainability</i> , 2021, 13, 2433.	1.6	7
23	A vision-based approach for automatic progress tracking of floor paneling in offsite construction facilities. <i>Automation in Construction</i> , 2021, 125, 103620.	4.8	37
24	A parametric simulation model for HVOF coating thickness control. <i>International Journal of Advanced Manufacturing Technology</i> , 2021, 116, 293-314.	1.5	5
25	Scientometric Analysis and Systematic Review of Multi-Material Additive Manufacturing of Polymers. <i>Polymers</i> , 2021, 13, 1957.	2.0	29
26	In-field instrumented ergonomic risk assessment: Inertial measurement units versus Kinect V2. <i>International Journal of Industrial Ergonomics</i> , 2021, 84, 103147.	1.5	33
27	Quantifying the Impact of Inspection Processes on Production Lines through Stochastic Discrete-Event Simulation Modeling. <i>Modelling</i> , 2021, 2, 406-424.	0.8	4
28	An open-source powered and ergonomic personal protective respirator for frontline COVID-19 response. <i>HardwareX</i> , 2021, 10, e00223.	1.1	2
29	A novel SMA-magnetorheological hybrid bracing system for seismic control. <i>Engineering Structures</i> , 2021, 244, 112709.	2.6	9
30	Dynamic response of frame structures with shape memory alloy -magnetorheological fluid-based bracing system by nonlinear time-history analysis. <i>Journal of Building Engineering</i> , 2021, 43, 102914.	1.6	4
31	Curved layered fused filament fabrication: An overview. <i>Additive Manufacturing</i> , 2021, 47, 102354.	1.7	8
32	An ontology model to support the automated design of aquaponic grow beds. <i>Procedia CIRP</i> , 2021, 100, 55-60.	1.0	13
33	Instrumented Ergonomic Risk Assessment Using Wearable Inertial Measurement Units: Impact of Joint Angle Convention. <i>IEEE Access</i> , 2021, 9, 7293-7305.	2.6	18
34	Design and simulation of an automated robotic machining cell for cross-laminated timber panels. <i>Procedia CIRP</i> , 2021, 100, 175-180.	1.0	6
35	Lab Scale Implementation of Industry 4.0 for an Automatic Yogurt Filling Production System—Experimentation, Modeling and Process Optimization. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 9821.	1.3	6
36	Vision-Based Damage Localization Method for an Autonomous Robotic Laser Cladding Process. <i>Procedia CIRP</i> , 2021, 104, 827-832.	1.0	2

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37	Vision-Based Associative Robotic Recognition of Working Status in Autonomous Manufacturing Environment. <i>Procedia CIRP</i> , 2021, 104, 1535-1540.	1.0	5
38	A decision support system to define, evaluate and guide the lean assessment and implementation at the shop-floor level. <i>International Journal of Manufacturing Research</i> , 2021, 16, 325.	0.1	1
39	Implementation of Lean Tools to Improve Mass Production of a Laser Cladding Process. , 2021, , .		1
40	Efficient Commercial Classification of Agricultural Products using Convolutional Neural Networks. <i>IAES International Journal of Robotics and Automation</i> , 2021, 10, 353.	0.2	0
41	A Topology Optimization Method for Hybrid Subtractive+Additive Remanufacturing. <i>International Journal of Precision Engineering and Manufacturing - Green Technology</i> , 2020, 7, 939-953.	2.7	36
42	BIM-based decision support system for automated manufacturability check of wood frame assemblies. <i>Automation in Construction</i> , 2020, 111, 103065.	4.8	31
43	Real-time growth rate and fresh weight estimation for little gem romaine lettuce in aquaponic grow beds. <i>Computers and Electronics in Agriculture</i> , 2020, 179, 105827.	3.7	30
44	Online vision-based inspection system for thermoplastic hot plate welding in window frame manufacturing. <i>Procedia CIRP</i> , 2020, 93, 1316-1321.	1.0	6
45	A science mapping study on learning factories research. <i>Procedia Manufacturing</i> , 2020, 45, 84-89.	1.9	4
46	Numerical Modeling and Analysis of Ti6Al4V Alloy Chip for Biomedical Applications. <i>Materials</i> , 2020, 13, 5236.	1.3	8
47	Automated Feature Extraction for Hybrid Additive-Subtractive Remanufacturing. <i>Procedia CIRP</i> , 2020, 93, 56-61.	1.0	3
48	A Qualitative Tool Condition Monitoring Framework Using Convolution Neural Network and Transfer Learning. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 7298.	1.3	20
49	Simulation-Driven Design of Wood Framing Support Systems for Off-Site Construction Machinery. <i>Journal of Construction Engineering and Management - ASCE</i> , 2020, 146, 04020075.	2.0	10
50	Cutting performances of TiCN+HfC and TiCN+HfC+WC ceramic tools in dry turning hardened AISI H13. <i>Advances in Applied Ceramics</i> , 2020, 119, 380-386.	0.6	9
51	Automated verification of 3D manufacturability for steel frame assemblies. <i>Automation in Construction</i> , 2020, 118, 103287.	4.8	14
52	Tensile Mechanical Behaviour of Multi-Polymer Sandwich Structures via Fused Deposition Modelling. <i>Polymers</i> , 2020, 12, 651.	2.0	56
53	Two-Axis Accelerometer Calibration and Nonlinear Correction Using Neural Networks: Design, Optimization, and Experimental Evaluation. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2020, 69, 6787-6794.	2.4	17
54	Topology Optimization for Multipatch Fused Deposition Modeling 3D Printing. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 943.	1.3	15

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55	Tribological behaviour of TiB ₂ -HfC ceramic tool material under dry sliding condition. <i>Ceramics International</i> , 2020, 46, 20320-20327.	2.3	11
56	Intelligent vision-based online inspection system of screw-fastening operations in light-gauge steel frame manufacturing. <i>International Journal of Advanced Manufacturing Technology</i> , 2020, 109, 645-657.	1.5	27
57	The impact on the mechanical properties of multi-material polymers fabricated with a single mixing nozzle and multi-nozzle systems via fused deposition modeling. <i>International Journal of Advanced Manufacturing Technology</i> , 2020, 106, 4509-4520.	1.5	57
58	A cost-driven process planning method for hybrid additive-subtractive remanufacturing. <i>Journal of Manufacturing Systems</i> , 2020, 55, 248-263.	7.6	40
59	Towards automated aquaponics: A review on monitoring, IoT, and smart systems. <i>Journal of Cleaner Production</i> , 2020, 263, 121571.	4.6	95
60	Design of a New Game for Teaching Assembly Process. <i>Mechanisms and Machine Science</i> , 2020, , 44-52.	0.3	2
61	A decision-making tool to integrate lean 4.0 in windows manufacturing using simulation and optimization models. , 2020, , .		2
62	An Improved Robot Path Planning Algorithm for a Novel Self-adapting Intelligent Machine Tending Robotic System. <i>Mechanisms and Machine Science</i> , 2020, , 53-64.	0.3	4
63	Feature extraction and process planning of integrated hybrid additive-subtractive system for remanufacturing. <i>Mathematical Biosciences and Engineering</i> , 2020, 17, 7274-7301.	1.0	8
64	Minimizing joist cutting waste through dynamic waste allocation in panelized floor manufacturing. <i>International Journal of Construction Management</i> , 2019, , 1-13.	2.2	3
65	A scientometric analysis and critical review of computer vision applications for construction. <i>Automation in Construction</i> , 2019, 107, 102947.	4.8	126
66	Material Selection Methodology for Additive Manufacturing Applications. <i>Procedia CIRP</i> , 2019, 84, 486-490.	1.0	12
67	Real-time visual detection and correction of automatic screw operations in dimpled light-gauge steel framing with pre-drilled pilot holes. <i>Procedia Manufacturing</i> , 2019, 34, 798-803.	1.9	14
68	Level set-based heterogeneous object modeling and optimization. <i>CAD Computer Aided Design</i> , 2019, 110, 50-68.	1.4	9
69	Intelligent assisted maintenance plan generation for corrective maintenance. <i>Manufacturing Letters</i> , 2019, 21, 7-11.	1.1	10
70	A primitive-based 3D reconstruction method for remanufacturing. <i>International Journal of Advanced Manufacturing Technology</i> , 2019, 103, 3667-3681.	1.5	19
71	Minimum length scale constraints in multi-scale topology optimisation for additive manufacturing. <i>Virtual and Physical Prototyping</i> , 2019, 14, 229-241.	5.3	27
72	A Hybrid Method Based on Systems Approach to Enhance Experiential Learning in Mechatronic Education. , 2019, , .		4

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73	Multi-view feature modeling for design-for-additive manufacturing. <i>Advanced Engineering Informatics</i> , 2019, 39, 144-156.	4.0	14
74	Generation of safe tool-paths for automatic manufacturing of light gauge steel panels in residential construction. <i>Automation in Construction</i> , 2019, 98, 46-60.	4.8	20
75	A vision-based system for pre-inspection of steel frame manufacturing. <i>Automation in Construction</i> , 2019, 97, 151-163.	4.8	75
76	Meta-Material Topology Optimization with Geometric Control. <i>Computer-Aided Design and Applications</i> , 2019, 16, 951-961.	0.4	3
77	Ontology-Based Knowledge Modeling for Frame Assemblies Manufacturing. , 2019, , .		10
78	A Decision Tool to Simulate the Concurrent Interdependencies Between Multi-DFX Techniques in Machine Design Conflict Resolution. , 2019, , .		0
79	Text Recognition and Machine Learning: For Impaired Robots and Humans. <i>Alberta Academic Review</i> , 2019, 2, 31-32.	0.0	0
80	Flying Spiders: A Reconfigurable Spider Drone For Education. <i>Alberta Academic Review</i> , 2019, 2, 3-4.	0.0	0
81	Light-weight shape and topology optimization with hybrid deposition path planning for FDM parts. <i>International Journal of Advanced Manufacturing Technology</i> , 2018, 97, 1123-1135.	1.5	29
82	Algorithm for remanufacturing of damaged parts with hybrid 3D printing and machining process. <i>Manufacturing Letters</i> , 2018, 15, 38-41.	1.1	24
83	Feature-Based Methodology for Design of Geometric Benchmark Test Artifacts for Additive Manufacturing Processes. <i>Procedia CIRP</i> , 2018, 70, 84-89.	1.0	25
84	Lean OR ERP – A Decision Support System to Satisfy Business Objectives. <i>Procedia CIRP</i> , 2018, 70, 422-427.	1.0	9
85	Alberta Learning Factory for training reconfigurable assembly process value stream mapping. <i>Procedia Manufacturing</i> , 2018, 23, 237-242.	1.9	13
86	Automated Maintenance Plan Generation Based On CAD Model Feature Recognition. <i>Procedia CIRP</i> , 2018, 70, 35-40.	1.0	6
87	An NC Code Based Machining Movement Simulation Method for a Parallel Robotic Machine. <i>Lecture Notes in Computer Science</i> , 2017, , 3-13.	1.0	2
88	A knowledge-based intelligent decision system for production planning. <i>International Journal of Advanced Manufacturing Technology</i> , 2017, 89, 1717-1729.	1.5	29
89	Path planning self-learning Algorithm for a dynamic changing environment. <i>MATEC Web of Conferences</i> , 2016, 42, 03002.	0.1	0
90	Safe and Automated Assembly Process using Vision Assisted Robot Manipulator. <i>Procedia CIRP</i> , 2016, 41, 771-776.	1.0	32

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91	Generation of safe and intelligent tool-paths for multi-axis machine-tools in a dynamic 2D virtual environment. International Journal of Computer Integrated Manufacturing, 2016, 29, 982-995.	2.9	15
92	Generation of safe tool-path for 2.5D milling/drilling machine-tool using 3D ToF sensor. CIRP Journal of Manufacturing Science and Technology, 2015, 10, 84-91.	2.3	13
93	Ant-Air Self-learning Algorithm for Path Planning in a Cluttered Environment. International Journal of Materials Mechanics and Manufacturing, 2015, 4, 127-130.	0.2	2
94	Human-Robot Collaboration: Twofold Strategy Algorithm to Avoid Collisions Using ToF Sensor. International Journal of Materials Mechanics and Manufacturing, 2015, 4, 144-147.	0.2	6
95	Safe and Automated Tool-Path Generation for Multi-Axis Production Machines. , 2014, , .		1
96	Game Methodology for Design Methods and Tools Selection. Journal of Learning Design, 2014, 7, .	0.8	1
97	3D safe and intelligent trajectory generation for multi-axis machine tools using machine vision. International Journal of Computer Integrated Manufacturing, 2013, 26, 365-385.	2.9	17
98	New computer vision based Snakes and Ladders algorithm for the safe trajectory of two axis CNC machines. CAD Computer Aided Design, 2012, 44, 355-366.	1.4	19
99	AllFactory: An Aquaponics 4.0 Transdisciplinary Educational and Applied Research Learning Factory at the University of Alberta. SSRN Electronic Journal, 0, , .	0.4	1
100	Real-time Implementation of Digital Twin for Robot Based Production Line. SSRN Electronic Journal, 0, , .	0.4	7
101	Investigating the effects of reduced technological constraints on cycle time through simulation modelling for automated steel wall framing. Modular and Offsite Construction (MOC) Summit Proceedings, 0, , .	0.0	1
102	Automatic Selection Tool of Quality Control Specifications for Off-site Construction Manufacturing Products: A BIM-based Ontology Model Approach. Modular and Offsite Construction (MOC) Summit Proceedings, 0, , 141-148.	0.0	9
103	Meta-Material Topology Optimization with Geometric Control. , 0, , .		0
104	A Collaborative Scheme for DFX Techniques in Concurrent Engineering Mitigated with Total Design Activity Model. Modular and Offsite Construction (MOC) Summit Proceedings, 0, , 1-8.	0.0	1
105	A Survey on Information Flow Tools in Albertaâ€™s Construction Industry. Modular and Offsite Construction (MOC) Summit Proceedings, 0, , 496-503.	0.0	0
106	Deep Learning-based Automatic Damage Recognition and Spatial Localization for Remanufacturing/Repair. , 0, , .		0
107	Use of Frozen Silt Mat, an Alternative to Crane Timber Mat to Minimize Energy as Ninth Waste and to Reduce CO ₂ Emissions. , 0, , .		0