Zhuming Bi

List of Publications by Year in descending order

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144 papers	5,428 citations	109137 35 h-index	95083 68 g-index
163 all docs	163 docs citations	163 times ranked	3949 citing authors

#	Article	IF	Citations
1	Internet of Things for Enterprise Systems of Modern Manufacturing. IEEE Transactions on Industrial Informatics, 2014, 10, 1537-1546.	7.2	529
2	Reconfigurable manufacturing systems: the state of the art. International Journal of Production Research, 2008, 46, 967-992.	4.9	344
3	Flexible fixture design and automation: Review, issues and future directions. International Journal of Production Research, 2001, 39, 2867-2894.	4.9	208
4	IoT and Cloud Computing in Automation of Assembly Modeling Systems. IEEE Transactions on Industrial Informatics, 2014, 10, 1426-1434.	7.2	207
5	AutoAssem: An Automated Assembly Planning System for Complex Products. IEEE Transactions on Industrial Informatics, 2012, 8, 669-678.	7.2	185
6	Data Cleaning for RFID and WSN Integration. IEEE Transactions on Industrial Informatics, 2014, 10, 408-418.	7.2	167
7	Advances in 3D data acquisition and processing for industrial applications. Robotics and Computer-Integrated Manufacturing, 2010, 26, 403-413.	6.1	165
8	Kinematic modeling of Exechon parallel kinematic machine. Robotics and Computer-Integrated Manufacturing, 2011, 27, 186-193.	6.1	163
9	Blockchain-based business process management (BPM) framework for service composition in industry 4.0. Journal of Intelligent Manufacturing, 2020, 31, 1737-1748.	4.4	145
10	Big data analytics with applications. Journal of Management Analytics, 2014, 1, 249-265.	1.6	119
11	Optimization of machining processes from the perspective of energy consumption: A case study. Journal of Manufacturing Systems, 2012, 31, 420-428.	7.6	117
12	Blockchain and Internet of Things for Modern Business Process in Digital Economyâ€"the State of the Art. IEEE Transactions on Computational Social Systems, 2019, 6, 1420-1432.	3.2	116
13	Revisiting System Paradigms from the Viewpoint of Manufacturing Sustainability. Sustainability, 2011, 3, 1323-1340.	1.6	114
14	Blockchain Technology for Applications in Internet of Thingsâ€"Mapping From System Design Perspective. IEEE Internet of Things Journal, 2019, 6, 8155-8168.	5.5	112
15	Enterprise Information Systems Architectureâ€"Analysis and Evaluation. IEEE Transactions on Industrial Informatics, 2013, 9, 2147-2154.	7.2	93
16	Object-Oriented Templates for Automated Assembly Planning of Complex Products. IEEE Transactions on Automation Science and Engineering, 2014, 11, 492-503.	3.4	93
17	Modularity Technology in Manufacturing: Taxonomy and Issues. International Journal of Advanced Manufacturing Technology, 2001, 18, 381-390.	1.5	91
18	Operations Research (OR) in Service Industries: A Comprehensive Review. Systems Research and Behavioral Science, 2013, 30, 300-353.	0.9	83

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19	New Blockchain-Based Architecture for Service Interoperations in Internet of Things. IEEE Transactions on Computational Social Systems, 2019, 6, 739-748.	3.2	80
20	An emerging technology â€“ wearable wireless sensor networks with applications in human health condition monitoring. Journal of Management Analytics, 2015, 2, 121-137.	1.6	68
21	Design and kinetostatic analysis of a new parallel manipulator. Robotics and Computer-Integrated Manufacturing, 2009, 25, 782-791.	6.1	67
22	A new methodology to support group decision-making for IoT-based emergency response systems. Information Systems Frontiers, 2014, 16, 953-977.	4.1	57
23	Optimal design of reconfigurable parallel machining systems. Robotics and Computer-Integrated Manufacturing, 2009, 25, 951-961.	6.1	56
24	Extended Interference Matrices for Exploded View of Assembly Planning. IEEE Transactions on Automation Science and Engineering, 2014, 11, 279-286.	3.4	55
25	Managing QoS of Internet-of-Things Services Using Blockchain. IEEE Transactions on Computational Social Systems, 2019, 6, 1357-1368.	3.2	55
26	A short-term energy prediction system based on edge computing for smart city. Future Generation Computer Systems, 2019, 101, 444-457.	4.9	54
27	Recent Development of Rehabilitation Robots. Advances in Mechanical Engineering, 2015, 7, 563062.	0.8	49
28	State-of-the-Art control strategies for robotic PiH assembly. Robotics and Computer-Integrated Manufacturing, 2020, 65, 101894.	6.1	49
29	Use of the manufacturing system design decomposition for comparative analysis and effective design of production systems. International Journal of Production Research, 2017, 55, 870-890.	4.9	48
30	Automated geneartion of the Dâ€“H parameters for configuration design of modular manipulators. Robotics and Computer-Integrated Manufacturing, 2007, 23, 553-562.	6.1	46
31	The general architecture of adaptive robotic systems for manufacturing applications. Robotics and Computer-Integrated Manufacturing, 2010, 26, 461-470.	6.1	46
32	Grinding characteristics of cBN-WC-10Co composites. Ceramics International, 2017, 43, 16539-16547.	2.3	46
33	A Framework for CAD- and Sensor-Based Robotic Coating Automation. IEEE Transactions on Industrial Informatics, 2007, 3, 84-91.	7.2	44
34	A visualization platform for internet of things in manufacturing applications. Internet Research, 2016, 26, 377-401.	2.7	42
35	Kinetostatic modeling of Exechon parallel kinematic machine for stiffness analysis. International Journal of Advanced Manufacturing Technology, 2014, 71, 325-335.	1.5	41
36	Real-time force monitoring of smart grippers for Internet of Things (IoT) applications. Journal of Industrial Information Integration, 2018, 11, 19-28.	4.3	38

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37	Sensing and responding to the changes of geometric surfaces in flexible manufacturing and assembly. Enterprise Information Systems, 2014, 8, 225-245.	3.3	37
38	Cloud computing in human resource management (HRM) system for small and medium enterprises (SMEs). International Journal of Advanced Manufacturing Technology, 2016, 84, 485-496.	1.5	37
39	Internet of things (IoT) and big data analytics (BDA) for digital manufacturing (DM). International Journal of Production Research, 2023, 61, 4004-4021.	4.9	37
40	Automation of Electrical Cable Harnesses Testing. Robotics, 2018, 7, 1.	2.1	36
41	Extension of Manufacturing System Design Decomposition to Implement Manufacturing Systems That are Sustainable. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2016, 138, .	1.3	35
42	IoT-based system for communication and coordination of football robot team. Internet Research, 2017, 27, 162-181.	2.7	33
43	Wear mechanism of single cBN-WC-10Co fiber cutter in machining of Ti-6Al-4V alloy. Journal of Materials Processing Technology, 2018, 259, 45-57.	3.1	33
44	A Novel Humanâ€“Machine Collaborative Interface for Aero-Engine Pipe Routing. IEEE Transactions on Industrial Informatics, 2013, 9, 2187-2199.	7.2	31
45	Automated modeling of modular robotic configurations. Robotics and Autonomous Systems, 2006, 54, 1015-1025.	3.0	30
46	Tribological behavior of cBN-WC-10Co composites for dry reciprocating sliding wear. Ceramics International, 2019, 45, 6447-6458.	2.3	30
47	An optimisation method for complex product design. Enterprise Information Systems, 2013, 7, 470-489.	3.3	27
48	Simulation and experiment of cutting characteristics for single cBN-WC-10Co fiber. Precision Engineering, 2018, 52, 170-182.	1.8	27
49	Specification Patterns of Service-Based Applications Using Blockchain Technology. IEEE Transactions on Computational Social Systems, 2020, 7, 886-896.	3.2	27
50	Joint workspace of parallel kinematic machines. Robotics and Computer-Integrated Manufacturing, 2009, 25, 57-63.	6.1	26
51	Design of a spherical parallel kinematic machine for ankle rehabilitation. Advanced Robotics, 2013, 27, 121-132.	1.1	26
52	An application of enterprise systems in quality management of products. Information Technology and Management, 2012, 13, 389-402.	1.4	25
53	Manufacturing System Design Meets Big Data Analytics for Continuous Improvement. Procedia CIRP, 2016, 50, 647-652.	1.0	25
54	Embracing Internet of Things (IoT) and big data for industrial informatics. Enterprise Information Systems, 2017, 11, 949-951.	3.3	25

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55	Risk assessment model based on multi-agent systems for complex product design. Information Systems Frontiers, 2015, 17, 363-385.	4.1	24
56	Support vector machine and ROC curves for modeling of aircraft fuel consumption. Journal of Management Analytics, 2015, 2, 22-34.	1.6	23
57	A generic Petri net model for flexible manufacturing systems and its use for FMS control software testing. International Journal of Production Research, 2000, 38, 1109-1131.	4.9	21
58	Analysis and Synthesis of Reconfigurable Robotic Systems. Concurrent Engineering Research and Applications, 2004, 12, 145-153.	2.0	21
59	Dynamic control model of a cobot with three omni-wheels. Robotics and Computer-Integrated Manufacturing, 2010, 26, 558-563.	6.1	21
60	Reconfiguring machines to achieve system adaptability and sustainability: A practical case study. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2014, 228, 1676-1688.	1.5	21
61	A new method to identify collaborative partners in social service provider networks. Information Systems Frontiers, 2016, 18, 565-578.	4.1	21
62	Development of a Real-Time Wearable Fall Detection System in the Context of Internet of Things. IEEE Internet of Things Journal, 2022, 9, 21999-22007.	5.5	21
63	Modelling and verification of fatigue damage for compliant mechanisms. Robotica, 2019, 37, 1-17.	1.3	20
64	The Extension of Semantic Formalization of Service Workflow Specification Language. IEEE Transactions on Industrial Informatics, 2019, 15, 741-754.	7.2	20
65	Blockchain technologies for interoperation of business processes in smart supply chains. Journal of Industrial Information Integration, 2022, 26, 100326.	4.3	20
66	Kinematic and dynamic models of a tripod system with a passive leg. IEEE/ASME Transactions on Mechatronics, 2006, 11, 108-111.	3.7	19
67	Extension of specification language for soundness and completeness of service workflow. Enterprise Information Systems, 2018, 12, 638-657.	3.3	19
68	Incorporating design improvement with effective evaluation using the Manufacturing System Design Decomposition (MSDD). Journal of Industrial Information Integration, 2016, 2, 65-74.	4.3	18
69	Overview of Finite Element Analysis. , 2018, , 1-29.		18
70	Improved control and simulation models of a tricycle collaborative robot. Journal of Intelligent Manufacturing, 2008, 19, 715-722.	4.4	17
71	Computer integrated reconfigurable experimental platform for ergonomic study of vehicle body design. International Journal of Computer Integrated Manufacturing, 2010, 23, 968-978.	2.9	17
72	Service selection and workflow composition in modern business processes. Journal of Industrial Information Integration, 2020, 17, 100126.	4.3	17

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73	Determination of Weights for Multiobjective Decision Making or Machine Learning. IEEE Systems Journal, 2014, 8, 63-72.	2.9	16
74	An adaptive genetic algorithm for demand-driven and resource-constrained project scheduling in aircraft assembly. Information Technology and Management, 2017, 18, 41-53.	1.4	16
75	Comprehensive Study on the Impact of Sternotomy Wires on UWB WBAN Channel Characteristics on the Human Chest Area. IEEE Access, 2019, 7, 74670-74682.	2.6	16
76	Experiments on formation mechanism of root humping in high-power laser autogenous welding of thick plates with stainless steels. Optics and Laser Technology, 2019, 111, 11-19.	2.2	16
77	A Knowledge Engineering Framework for Identifying Key Impact Factors from Safetyâ€Related Accident Cases. Systems Research and Behavioral Science, 2014, 31, 383-397.	0.9	15
78	State of the art of friction modelling at interfaces subjected to elastohydrodynamic lubrication (EHL). Friction, 2021, 9, 207-227.	3.4	15
79	Applying Electromagnetic Field Theory to Study the Synergistic Relationships Between Technology Standardization and Technology Development. Systems Research and Behavioral Science, 2013, 30, 272-286.	0.9	14
80	An Analogical Induction Approach to Technology Standardization and Technology Development. Systems Research and Behavioral Science, 2014, 31, 366-382.	0.9	14
81	Modelling of humanâ€“machine interaction in equipment design of manufacturing cells. Enterprise Information Systems, 2017, 11, 969-987.	3.3	14
82	Low-Rank Joint Embedding and Its Application for Robust Process Monitoring. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-13.	2.4	14
83	A Rough Programming Model Based on the Greatest Compatible Classes and Synthesis Effect. Systems Research and Behavioral Science, 2013, 30, 229-243.	0.9	13
84	Developing a rapid response production system for aircraft manufacturing. International Journal of Production Economics, 2013, 146, 37-47.	5.1	13
85	New CAD/CAM course framework in digital manufacturing. Computer Applications in Engineering Education, 2019, 27, 128-144.	2.2	13
86	Friction predication on pin-to-plate interface of PTFE material and steel. Friction, 2019, 7, 268-281.	3.4	12
87	rmSWSpec: Real-Time Monitoring of Service Workflow Specification Language for Specification Patterns. IEEE Transactions on Industrial Informatics, 2019, 15, 4021-4032.	7.2	12
88	Impact of ultrasonic vibration on microstructure and mechanical properties of diamond in laser brazing with Niâ€“Cr filler alloy. Ceramics International, 2022, 48, 4096-4104.	2.3	12
89	Relationship-specific investment, value creation, and value appropriation in cooperative innovation. Information Technology and Management, 2014, 15, 119.	1.4	11
90	Deep Learning-Based Complete Coverage Path Planning With Re-Joint and Obstacle Fusion Paradigm. Frontiers in Robotics and AI, 2022, 9, 843816.	2.0	11

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91	Development and Control of a 5-Axis Reconfigurable Machine Tool. Journal of Robotics, 2011, 2011, 1-9.	0.6	10
92	An integrated systems approach to plateau ecosystem managementâ€"a scientific application in Qinghai and Tibet plateau. Information Systems Frontiers, 2015, 17, 337-350.	4.1	10
93	Modeling and prediction of fatigue life of robotic components in intelligent manufacturing. Journal of Intelligent Manufacturing, 2019, 30, 2575-2585.	4.4	10
94	Framework for Performance Assessment of Heterogeneous Robotic Systems. IEEE Systems Journal, 2021, 15, 1191-1201.	2.9	10
95	Generic Design Methodology for Smart Manufacturing Systems from a Practical Perspective. Part Iiâ€"Systematic Designs of Smart Manufacturing Systems. Machines, 2021, 9, 208.	1.2	10
96	New digital triad (DT-II) concept for lifecycle information integration of sustainable manufacturing systems. Journal of Industrial Information Integration, 2022, 26, 100316.	4.3	10
97	Finite element analysis for diagnosis of fatigue failure of composite materials in product development. International Journal of Advanced Manufacturing Technology, 2016, 87, 2245-2257.	1.5	9
98	Mechanisms for Improvement of Weld Appearance in Autogenous Fiber Laser Welding of Thick Stainless Steels. Metals, 2018, 8, 625.	1.0	9
99	An integrated cost-based approach for real estate appraisals. Information Technology and Management, 2013, 15, 131.	1.4	8
100	A supportive architecture for CFD-based design optimisation. Enterprise Information Systems, 2014, 8, 246-278.	3.3	8
101	An industrial information integration approach to in-orbit spacecraft. Enterprise Information Systems, 2017, 11, 86-104.	3.3	8
102	Instrumentation and self-repairing control for resilient multi-rotor aircrafts. Industrial Robot, 2018, 45, 647-656.	1.2	8
103	System framework of adopting additive manufacturing in mass production line. Enterprise Information Systems, 2022, 16, 606-629.	3.3	8
104	Generic Design Methodology for Smart Manufacturing Systems from a Practical Perspective, Part Iâ€"Digital Triad Concept and Its Application as a System Reference Model. Machines, 2021, 9, 207.	1.2	8
105	Formulation and Validation of Multidisciplinary Design Problem on Wear and Fatigue Life of Lead Screw Actuators. Mathematical Problems in Engineering, 2013, 2013, 1-10.	0.6	7
106	A semantics-based method for clustering of Chinese web search results. Enterprise Information Systems, 2014, 8, 147-165.	3.3	7
107	Integrating everyday examples in mechanical engineering courses for teaching enhancement. International Journal of Mechanical Engineering Education, 2016, 44, 16-28.	0.6	7
108	Collaborative Multiple Rank Regression for Temperature Prediction of Blast Furnace. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-10.	2.4	7

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109	Feature weighted naÃ¨ve Bayes algorithm for information retrieval of enterprise systems. Enterprise Information Systems, 2014, 8, 107-120.	3.3	6
110	A new approach for image databases design. Information Technology and Management, 2017, 18, 97-105.	1.4	6
111	Expert-guided evolutionary algorithm for layout design of complex space stations. Enterprise Information Systems, 2017, 11, 1078-1093.	3.3	6
112	Design of Human Health Monitoring System Based on NB-IoT. , 2019, , .		6
113	Modeling and Quantification of Impact of Psychological Factors on Rehabilitation of Stroke Patients. IEEE Journal of Biomedical and Health Informatics, 2019, 23, 683-692.	3.9	6
114	Automatic robotic recharging systems â€“ development and challenges. Industrial Robot, 2021, 48, 95-109.	1.2	6
115	Microstructure and properties at bonds of diamond grains and Ni Cr filler alloy by fiber laser brazing. Diamond and Related Materials, 2022, 125, 108969.	1.8	6
116	Modeling and optimization of two-stage procurement in dual-channel supply chain. Information Technology and Management, 2014, 15, 109.	1.4	5
117	Research of home environment surveillance system based on wireless sensor network. , 2017, , .		5
118	Augmenting cryptocurrency in smart supply chain. Journal of Industrial Information Integration, 2021, 21, 100188.	4.3	5
119	User-Oriented Selections of Validators for Trust of Internet-of-Thing Services. IEEE Transactions on Industrial Informatics, 2022, 18, 4859-4867.	7.2	5
120	Multidisciplinary Design Optimization in Engineering. Mathematical Problems in Engineering, 2013, 2013, 1-2.	0.6	4
121	Segmentation of prostate ultrasound images: the state of the art and the future directions of segmentation algorithms. Artificial Intelligence Review, 2023, 56, 615-651.	9.7	4
122	Design and simulation of dust extraction for composite drilling. International Journal of Advanced Manufacturing Technology, 2011, 54, 629-638.	1.5	3
123	Motion Purity of Robotic Mechanisms with Desired and Undesired Motions. Advanced Robotics, 2011, 25, 1539-1556.	1.1	3
124	Simulation-Based Design and Optimization of Accelerometers Subject to High-Temperature and High-Impact Loads. Sensors, 2019, 19, 3759.	2.1	3
125	Practical Guide to Digital Manufacturing. , 2021, , .		3
126	An integrated environment for visualization of distributed wireless sensor networks. , 2013, , .		2

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127	Fatigue life modeling of linear actuators in robotics and automation. , 2016, , .		2
128	Automated testing of electrical cable harnesses. , 2018, , .		2
129	Function Approximation through an Efficient Neural Networks Method. , 0, , .		2
130	Instrumentation of robotic grippers for dynamic control of robotic systems. , 2018, , .		1
131	A Max-Min Ant System Approach to Autonomous Navigation. , 2019, , .		1
132	Digital Manufacturing (DM). , 2021, , 389-424.		1
133	The wireless sensor network of the family environment monitoring system research. , 2016, , .		1
134	Micromanipulation Tools. Microsystems and Nanosystems, 2017, , 547-561.	0.1	1
135	Kinematic, Dynamic Modeling and Remote Control of a Robotic Machine. , 2007, , .		0
136	Theoretical Design and Control Analysis of Reconfigurable Parallel Kinematic Machine Tools. , 2007, , .		0
137	Overview of Testing Platform for Development of Integrated Robotic Systems at NIST. , 2019, , .		0
138	Computer-Aided Design. , 2021, , 35-116.		0
139	Computer-Aided Engineering (CAE). , 2021, , 117-222.		0
140	Human Civilization, Products, and Manufacturing. , 2021, , 1-33.		0
141	Fatigue Analysis of Actuators with Teflon Impregnated Coatingâ€"Challenges in Numerical Simulation. Actuators, 2021, 10, 82.	1.2	0
142	Computer Integrated Manufacturing (CIM). , 2021, , 321-388.		0
143	Analysis of Human-Machine Cooperative Robot and haptic interaction for stroke rehabilitation. , 2017, , .		0
144	Testing Platform of Chains and Sprockets for Conveyer System Designs. Procedia Manufacturing, 2021, 55, 96-101.	1.9	0