

Lei Ren

List of Publications by Year in descending order

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98
papers

4,814
citations

147566

31
h-index

98622

67
g-index

100
all docs

100
docs citations

100
times ranked

3938
citing authors

#	ARTICLE	IF	CITATIONS
1	Cloud manufacturing: a new manufacturing paradigm. Enterprise Information Systems, 2014, 8, 167-187.	3.3	683
2	A Novel Cloud-Based Framework for the Elderly Healthcare Services Using Digital Twin. IEEE Access, 2019, 7, 49088-49101.	2.6	358
3	Remaining Useful Life Prediction for Lithium-Ion Battery: A Deep Learning Approach. IEEE Access, 2018, 6, 50587-50598.	2.6	267
4	Bearing remaining useful life prediction based on deep autoencoder and deep neural networks. Journal of Manufacturing Systems, 2018, 48, 71-77.	7.6	257
5	A Data-Driven Auto-CNN-LSTM Prediction Model for Lithium-Ion Battery Remaining Useful Life. IEEE Transactions on Industrial Informatics, 2021, 17, 3478-3487.	7.2	254
6	Cloud manufacturing: key characteristics and applications. International Journal of Computer Integrated Manufacturing, 2017, 30, 501-515.	2.9	232
7	Cloud manufacturing: from concept to practice. Enterprise Information Systems, 2015, 9, 186-209.	3.3	222
8	Multi-bearing remaining useful life collaborative prediction: A deep learning approach. Journal of Manufacturing Systems, 2017, 43, 248-256.	7.6	209
9	Prediction of Bearing Remaining Useful Life With Deep Convolution Neural Network. IEEE Access, 2018, 6, 13041-13049.	2.6	177
10	Customized production based on distributed 3D printing services in cloud manufacturing. International Journal of Advanced Manufacturing Technology, 2016, 84, 71-83.	1.5	120
11	Multi-scale Dense Gate Recurrent Unit Networks for bearing remaining useful life prediction. Future Generation Computer Systems, 2019, 94, 601-609.	4.9	119
12	High-Performance Ionic-Polymer-Metal Composite: Toward Large-Deformation Fast-Response Artificial Muscles. Advanced Functional Materials, 2020, 30, 1908508.	7.8	111
13	ADTT: A Highly Efficient Distributed Tensor-Train Decomposition Method for IIoT Big Data. IEEE Transactions on Industrial Informatics, 2021, 17, 1573-1582.	7.2	100
14	A modeling and description method of multidimensional information for manufacturing capability in cloud manufacturing system. International Journal of Advanced Manufacturing Technology, 2013, 69, 961-975.	1.5	89
15	Real-Time Scheduling of Cloud Manufacturing Services Based on Dynamic Data-Driven Simulation. IEEE Transactions on Industrial Informatics, 2019, 15, 5042-5051.	7.2	84
16	An event-triggered dynamic scheduling method for randomly arriving tasks in cloud manufacturing. International Journal of Computer Integrated Manufacturing, 2018, 31, 318-333.	2.9	78
17	A Data-Driven Approach of Product Quality Prediction for Complex Production Systems. IEEE Transactions on Industrial Informatics, 2021, 17, 6457-6465.	7.2	78
18	A methodology towards virtualisation-based high performance simulation platform supporting multidisciplinary design of complex products. Enterprise Information Systems, 2012, 6, 267-290.	3.3	76

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19	A Tensor-Based Multiattributes Visual Feature Recognition Method for Industrial Intelligence. IEEE Transactions on Industrial Informatics, 2021, 17, 2231-2241.	7.2	75
20	Cloud-Edge-Based Lightweight Temporal Convolutional Networks for Remaining Useful Life Prediction in IIoT. IEEE Internet of Things Journal, 2021, 8, 12578-12587.	5.5	72
21	A survey of visualization for smart manufacturing. Journal of Visualization, 2019, 22, 419-435.	1.1	71
22	Recent progress in 4D printing of stimuli-responsive polymeric materials. Science China Technological Sciences, 2020, 63, 532-544.	2.0	61
23	A Wide-Deep-Sequence Model-Based Quality Prediction Method in Industrial Process Analysis. IEEE Transactions on Neural Networks and Learning Systems, 2020, 31, 3721-3731.	7.2	58
24	Defect intelligent identification in resistance spot welding ultrasonic detection based on wavelet packet and neural network. International Journal of Advanced Manufacturing Technology, 2017, 90, 2581-2588.	1.5	53
25	A Multiobjective multifactorial optimization algorithm based on decomposition and dynamic resource allocation strategy. Information Sciences, 2020, 511, 18-35.	4.0	52
26	4D printing of PLA/PCL shape memory composites with controllable sequential deformation. Bio-Design and Manufacturing, 2021, 4, 867-878.	3.9	47
27	Pairwise comparison learning based bearing health quantitative modeling and its application in service life prediction. Future Generation Computer Systems, 2019, 97, 578-586.	4.9	41
28	A Data-Driven Self-Supervised LSTM-DeepFM Model for Industrial Soft Sensor. IEEE Transactions on Industrial Informatics, 2022, 18, 5859-5869.	7.2	39
29	Massive sensor data management framework in Cloud manufacturing based on Hadoop. , 2012, , .		34
30	Research on the impact of service provider cooperative relationship on cloud manufacturing platform. International Journal of Advanced Manufacturing Technology, 2016, 86, 2279-2290.	1.5	34
31	Coding-Based Large-Scale Task Assignment for Industrial Edge Intelligence. IEEE Transactions on Network Science and Engineering, 2020, 7, 2286-2297.	4.1	33
32	Modelling and simulation of logistics service selection in cloud manufacturing. Procedia CIRP, 2018, 72, 916-921.	1.0	32
33	DIMA: Distributed cooperative microservice caching for internet of things in edge computing by deep reinforcement learning. World Wide Web, 2022, 25, 1769-1792.	2.7	31
34	Non-invasive Quantitative Assessment of Muscle Force Based on Ultrasonic Shear Wave Elastography. Ultrasound in Medicine and Biology, 2019, 45, 440-451.	0.7	29
35	A comparative analysis of eleven neural networks architectures for small datasets of lung images of COVID-19 patients toward improved clinical decisions. Computers in Biology and Medicine, 2021, 139, 104887.	3.9	25
36	Cloud-Based Intelligent User Interface for Cloud Manufacturing: Model, Technology, and Application. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2015, 137, .	1.3	23

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37	MCTAN: A Novel Multichannel Temporal Attention-Based Network for Industrial Health Indicator Prediction. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2023, 34, 6456-6467.	7.2	23
38	Detecting milling deformation in 7075 aluminum alloy thin-walled plates using finite difference method. <i>International Journal of Advanced Manufacturing Technology</i> , 2016, 85, 1291-1302.	1.5	21
39	A Review of Biological Fluid Power Systems and Their Potential Bionic Applications. <i>Journal of Bionic Engineering</i> , 2019, 16, 367-399.	2.7	21
40	QTT-DLSTM: A Cloud-Edge-Aided Distributed LSTM for Cyber-Physical-Social Big Data. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2023, 34, 7286-7298.	7.2	20
41	A dynamic and static data based matching method for cloud 3D printing. <i>Robotics and Computer-Integrated Manufacturing</i> , 2020, 61, 101858.	6.1	19
42	A Multi-Agent Reinforcement Learning Method With Route Recorders for Vehicle Routing in Supply Chain Management. <i>IEEE Transactions on Intelligent Transportation Systems</i> , 2022, 23, 16410-16420.	4.7	19
43	Hypersensitized Strain Sensors Based on Conductive Hydrogels with Excellent Conductivity and Good Mechanical Properties. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 4425-4437.	3.2	19
44	3D Printing in the Context of Cloud Manufacturing. <i>Robotics and Computer-Integrated Manufacturing</i> , 2022, 74, 102256.	6.1	18
45	A Visual Analysis Approach for Understanding Durability Test Data of Automotive Products. <i>ACM Transactions on Intelligent Systems and Technology</i> , 2019, 10, 1-23.	2.9	16
46	Design of Decision Tree Structure with Improved BPNN Nodes for High-Accuracy Locomotion Mode Recognition Using a Single IMU. <i>Sensors</i> , 2021, 21, 526.	2.1	15
47	Phalangeal joints kinematics during ostrich (<i>Struthio camelus</i>) locomotion. <i>PeerJ</i> , 2017, 5, e2857.	0.9	15
48	A Binocular Vision Application in IoT: Realtime Trustworthy Road Condition Detection System in Passable Area. <i>IEEE Transactions on Industrial Informatics</i> , 2023, 19, 973-983.	7.2	13
49	An enzyme-linked immunosorbent assay for the determination of tribenuron-methyl in water and soil using a molecularly imprinted film as an artificial antibody. <i>Analytical Methods</i> , 2013, 5, 5677.	1.3	12
50	Simulation analysis of ultrasonic detection for resistance spot welding based on COMSOL Multiphysics. <i>International Journal of Advanced Manufacturing Technology</i> , 2017, 93, 2089-2096.	1.5	12
51	An ABGE-aided manufacturing knowledge graph construction approach for heterogeneous IIoT data integration. <i>International Journal of Production Research</i> , 2023, 61, 4102-4116.	4.9	12
52	LM-CNN: A Cloud-Edge Collaborative Method for Adaptive Fault Diagnosis With Label Sampling Space Enlarging. <i>IEEE Transactions on Industrial Informatics</i> , 2022, 18, 9057-9067.	7.2	12
53	Master data management for manufacturing big data: a method of evaluation for data network. <i>World Wide Web</i> , 2020, 23, 1407-1421.	2.7	11
54	In vivo assessment of material properties of muscles and connective tissues around the knee joint based on shear wave elastography. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2020, 109, 103829.	1.5	11

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55	A T^2 -Tensor-Aided Multiscale Transformer for Remaining Useful Life Prediction in IIoT. IEEE Transactions on Industrial Informatics, 2022, 18, 8108-8118.	7.2	11
56	A sliding window-based multi-stage clustering and probabilistic forecasting approach for large multivariate time series data. Journal of Statistical Computation and Simulation, 2017, 87, 2494-2508.	0.7	10
57	Early diagnosis of diabetic peripheral neuropathy based on infrared thermal imaging technology. Diabetes/Metabolism Research and Reviews, 2021, 37, e3429.	1.7	10
58	Flexible strain sensor with ridge-like microstructures for wearable applications. Polymers for Advanced Technologies, 2022, 33, 96-103.	1.6	10
59	High Specific Surface Area Pd/Pt Electrode-Based Ionic Polymer-Metal Composite for High-Performance Biomimetic Actuation. ACS Sustainable Chemistry and Engineering, 2022, 10, 2645-2652.	3.2	10
60	Cloud Manufacturing Platform: Operating Paradigm, Functional Requirements, and Architecture Design. , 2013, , .		9
61	Future Manufacturing Industry with Cloud Manufacturing. , 2014, , 127-152.		9
62	Parallel Scheduling of Large-Scale Tasks for Industrial Cloud-Edge Collaboration. IEEE Internet of Things Journal, 2023, 10, 3231-3242.	5.5	9
63	The optimal allocation model of computing resources in cloud manufacturing system. , 2011, , .		8
64	Robotic Disassembly Sequence Planning With Backup Actions. IEEE Transactions on Automation Science and Engineering, 2022, 19, 2095-2107.	3.4	8
65	Development of a 3D Printed Bipedal Robot: Towards Humanoid Research Platform to Study Human Musculoskeletal Biomechanics. Journal of Bionic Engineering, 2021, 18, 150-170.	2.7	8
66	Matching and selection of distributed 3D printing services in cloud manufacturing. , 2017, , .		7
67	Simulation of Production Modes for Cloud Manufacturing Enterprises. , 2018, , .		7
68	Influence of Mesostructure on Mechanical Property of Laminated Ti-Al Composites. Advanced Engineering Materials, 2017, 19, 1700070.	1.6	6
69	A biomechanical analysis of 3D stress and strain patterns in patellar tendon during knee flexion. International Journal for Numerical Methods in Biomedical Engineering, 2020, 36, e3379.	1.0	6
70	Custom Grasping: A Region-Based Robotic Grasping Detection Method in Industrial Cyber-Physical Systems. IEEE Transactions on Automation Science and Engineering, 2023, 20, 88-100.	3.4	6
71	Banded choropleth map. Personal and Ubiquitous Computing, 2018, 22, 503-510.	1.9	5
72	Study on intelligent deformation characteristics of temperature-driven hydrogel actuators prepared via molding and 3D printing. Polymers for Advanced Technologies, 2020, 31, 1980-1993.	1.6	5

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73	Load-dependent Variable Gearing Mechanism of Muscle-like Soft Actuator. Journal of Bionic Engineering, 2022, 19, 29-43.	2.7	5
74	An Optimal Allocation Method for Virtual Resource Considering Variable Metrics of Cloud Manufacturing Service. , 2015, , .		4
75	Analysis of Spidersâ€™™ Joint Kinematics and Driving Modes under Different Ground Conditions. Applied Bionics and Biomechanics, 2019, 2019, 1-9.	0.5	4
76	Cloud based 3D printing service platform for personalized manufacturing. Science China Information Sciences, 2020, 63, 1.	2.7	4
77	<i>In Vivo</i> Assessment of Lower Limb Muscle Stress State Based on Shear Wave Elastography. IEEE Access, 2020, 8, 122185-122196.	2.6	4
78	Speed-Related Energy Flow and Joint Function Change During Human Walking. Frontiers in Bioengineering and Biotechnology, 2021, 9, 666428.	2.0	4
79	An Efficient Dynamic Load Balancing Method for Simulation of Variable Structure Systems. , 2013, , .		3
80	Simulation Model of Dynamic Service Scheduling in Cloud Manufacturing. , 2018, , .		3
81	Frictional performance of ostrich (Struthio camelus) foot sole on sand in all directions. Biomechanics and Modeling in Mechanobiology, 2021, 20, 671-681.	1.4	3
82	Integration 3D printing of bionic continuous carbon fiber reinforced resin composite. Materials Research Express, 2021, 8, 095602.	0.8	3
83	Bioinspired actuators with intrinsic muscle-like mechanical properties. IScience, 2021, 24, 103023.	1.9	3
84	Evaluating performance variations cross cloud data centres using multiview comparative workload traces analysis. Connection Science, 2022, 34, 1582-1608.	1.8	3
85	A Blockchain Model for Industrial Internet. , 2018, , .		2
86	Association Between Pain in Knee Osteoarthritis and Mechanical Properties of Soft Tissue Around Knee Joint. IEEE Access, 2021, 9, 14599-14607.	2.6	2
87	The Impact of Locomotor Speed on the Human Metatarsophalangeal Joint Kinematics. Frontiers in Bioengineering and Biotechnology, 2021, 9, 644582.	2.0	2
88	Alterations in plantar vessel blood flow in patients with mild diabetic peripheral neuropathy. BMJ Open Diabetes Research and Care, 2022, 10, e002492.	1.2	2
89	Locomotor mechanism of Haplopelma hainanum based on Energy conservation analysis. Biology Open, 2020, 9, .	0.6	1
90	Biomechanical Functions of the Canine Metacarpal and Metatarsal Pads during Locomotion: A Comparative Analysis. Journal of Bionic Engineering, 2020, 17, 580-590.	2.7	1

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91	Effect of oxygen addition and annealing time on microstructure and mechanical properties of Ti-34Nb alloy. Journal of Iron and Steel Research International, 0, , .	1.4	1
92	Analysis and validation of a 3D finite element model for human forearm fracture. International Journal for Numerical Methods in Biomedical Engineering, 2022, , e3617.	1.0	1
93	SSOA-E: Research on Semantic Service Oriented Architecture for Education Information System Integration. , 2009, , .		0
94	A virtual machine deployment approach using knowledge curves in Cloud Simulation. , 2012, , .		0
95	A sketch&fisheye interface for visual analytics of large time-series. , 2014, , .		0
96	A Sharing Bike Scheduling Optimization Algorithm Based on Two-Dimensional Dynamic Model and Improved Genetic Algorithm. , 2018, , .		0
97	Diagnosing Evolution of Cloud Cluster via Spatio-temporal Trace Analysis. Journal of Circuits, Systems and Computers, 0, , .	1.0	0
98	Noninvasive in vivo study on the morphology and mechanical properties of palmar aponeurosis. Journal of Biomechanics, 2022, 135, 111027.	0.9	0