

Rahul Rai

List of Publications by Year in descending order

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Version: 2024-02-01

55
papers

1,478
citations

430874

18
h-index

345221

36
g-index

56
all docs

56
docs citations

56
times ranked

1084
citing authors

#	ARTICLE	IF	CITATIONS
1	Machine learning in manufacturing and industry 4.0 applications. International Journal of Production Research, 2021, 59, 4773-4778.	7.5	167
2	FeatureNet: Machining feature recognition based on 3D Convolution Neural Network. CAD Computer Aided Design, 2018, 101, 12-22.	2.7	140
3	Driven by Data or Derived Through Physics? A Review of Hybrid Physics Guided Machine Learning Techniques With Cyber-Physical System (CPS) Focus. IEEE Access, 2020, 8, 71050-71073.	4.2	135
4	CNN-LSTM deep learning architecture for computer vision-based modal frequency detection. Mechanical Systems and Signal Processing, 2020, 144, 106885.	8.0	112
5	Artificial intelligence (AI) in augmented reality (AR)-assisted manufacturing applications: a review. International Journal of Production Research, 2021, 59, 4903-4959.	7.5	96
6	Additive Manufacturing of Functionally Graded Material Objects: A Review. Journal of Computing and Information Science in Engineering, 2018, 18, .	2.7	71
7	Deep learning-based stress prediction for bottom-up SLA 3D printing process. International Journal of Advanced Manufacturing Technology, 2019, 102, 2555-2569.	3.0	65
8	Development and Utilization of Ontologies in Design for Manufacturing. Journal of Mechanical Design, Transactions of the ASME, 2010, 132, .	2.9	50
9	A product life cycle ontology for additive manufacturing. Computers in Industry, 2019, 105, 191-203.	9.9	47
10	Convolutional neural network-based inspection of metal additive manufacturing parts. Rapid Prototyping Journal, 2019, 25, 530-540.	3.2	43
11	Build orientation optimization for additive manufacturing of functionally graded material objects. International Journal of Advanced Manufacturing Technology, 2018, 96, 223-235.	3.0	41
12	Sustainability-induced dual-level optimization of additive manufacturing process. International Journal of Advanced Manufacturing Technology, 2017, 88, 1945-1959.	3.0	38
13	Ontology-based approach to extract product's design features from online customers' reviews. Computers in Industry, 2020, 116, 103175.	9.9	35
14	Human factors study on the usage of BCI headset for 3D CAD modeling. CAD Computer Aided Design, 2014, 54, 51-55.	2.7	27
15	Assembly-based conceptual 3D modeling with unlabeled components using probabilistic factor graph. CAD Computer Aided Design, 2016, 74, 45-54.	2.7	27
16	Machine auscultation: enabling machine diagnostics using convolutional neural networks and large-scale machine audio data. Advances in Manufacturing, 2019, 7, 174-187.	6.1	26
17	Principles for Managing Technological Product Obsolescence. IEEE Transactions on Components and Packaging Technologies, 2008, 31, 880-889.	1.3	24
18	The interpretive model of manufacturing: a theoretical framework and research agenda for machine learning in manufacturing. International Journal of Production Research, 2021, 59, 4960-4994.	7.5	24

#	ARTICLE	IF	CITATIONS
19	IH-GAN: A conditional generative model for implicit surface-based inverse design of cellular structures. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2022, 396, 115060.	6.6	22
20	PI-LSTM: Physics-Infused Long Short-Term Memory Network. , 2019, , .		21
21	Data-driven simulation for fast prediction of pull-up process in bottom-up stereo-lithography. <i>CAD Computer Aided Design</i> , 2018, 99, 29-42.	2.7	20
22	MIDPhyNet: Memorized infusion of decomposed physics in neural networks to model dynamic systems. <i>Neurocomputing</i> , 2021, 428, 116-129.	5.9	19
23	Improving connectivity and accelerating multiscale topology optimization using deep neural network techniques. <i>Structural and Multidisciplinary Optimization</i> , 2022, 65, 1.	3.5	19
24	An ontological approach to representing the product life cycle. <i>Applied Ontology</i> , 2019, 14, 179-197.	2.0	18
25	Personal protective equipments (PPEs) for COVID-19: a product lifecycle perspective. <i>International Journal of Production Research</i> , 2022, 60, 3282-3303.	7.5	14
26	Development of a Manufacturing Ontology for Functionally Graded Materials. , 2016, , .		12
27	Multi-stage deep neural network accelerated topology optimization. <i>Structural and Multidisciplinary Optimization</i> , 2021, 64, 3473-3487.	3.5	12
28	Conceptual Three-Dimensional Modeling Using Intuitive Gesture-Based Midair Three-Dimensional Sketching Technique. <i>Journal of Computing and Information Science in Engineering</i> , 2018, 18, .	2.7	11
29	Detecting functional field units from satellite images in smallholder farming systems using a deep learning based computer vision approach: A case study from Bangladesh. <i>Remote Sensing Applications: Society and Environment</i> , 2020, 20, 100413.	1.5	11
30	Automated Procedure Reconfiguration Framework for Augmented Reality-Guided Maintenance Applications. <i>Journal of Computing and Information Science in Engineering</i> , 2021, 21, .	2.7	11
31	Fragmentary shape recognition: A BCI study. <i>CAD Computer Aided Design</i> , 2016, 71, 51-64.	2.7	10
32	A geometric reasoning approach for additive manufacturing print quality assessment and automated model correction. <i>CAD Computer Aided Design</i> , 2019, 109, 1-11.	2.7	10
33	Additive Manufacturing of Functionally Graded Objects: A Review. , 2016, , .		9
34	Hierarchical combinatorial design and optimization of non-periodic metamaterial structures. <i>Additive Manufacturing</i> , 2021, 37, 101710.	3.0	9
35	A Stochastic Tree-Search Algorithm for Generative Grammars ¹ . <i>Journal of Computing and Information Science in Engineering</i> , 2012, 12, .	2.7	8
36	Generative design of conformal cubic periodic cellular structures using a surrogate model-based optimisation scheme. <i>International Journal of Production Research</i> , 2022, 60, 1458-1477.	7.5	8

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37	Degradation Mechanism Detection in Photovoltaic Backsheets by Fully Convolutional Neural Network. Scientific Reports, 2019, 9, 16119.	3.3	7
38	A physics-aware learning architecture with input transfer networks for predictive modeling. Applied Soft Computing Journal, 2020, 96, 106665.	7.2	7
39	Controlling Draft Interactions Between Quadcopter Unmanned Aerial Vehicles with Physics-aware Modeling. Journal of Intelligent and Robotic Systems: Theory and Applications, 2021, 101, 1.	3.4	7
40	Invariant probabilistic sensitivity analysis for building energy models. Journal of Building Performance Simulation, 2017, 10, 392-405.	2.0	6
41	Enriching the functionally graded materials (FGM) ontology for digital manufacturing. International Journal of Production Research, 2020, , 1-18.	7.5	6
42	Autonomous task assignment of multiple operators for human robot interaction. , 2013, , .		5
43	Computational Geometric Solutions for Efficient Additive Manufacturing Process Planning. , 2014, , .		5
44	Investigation of compressive deformation behaviors of cubic periodic cellular structural cubes through 3D printed parts and FE simulations. Rapid Prototyping Journal, 2019, 26, 459-472.	3.2	5
45	Continuous video stream pixel sensor: A CNN&LSTM based deep learning approach for mode shape prediction. Structural Control and Health Monitoring, 0, , e2892.	4.0	5
46	A Preference-Based Approach to Assess a Component&TM's Design Readiness for Additive Manufacturing. Journal of Mechanical Design, Transactions of the ASME, 2020, 142, .	2.9	4
47	Classification of Bio-Inspired Periodic Cubic Cellular Materials Based on Compressive Deformation Behaviors of 3D Printed Parts and FE Simulations. , 2016, , .		3
48	A method for monitoring head media spacing change in a hard disk drive using an embedded contact sensor. Microsystem Technologies, 2020, 26, 3459-3467.	2.0	3
49	Hierarchical Combinatorial Design and Optimization of Quasi-Periodic Metamaterial Structures. , 2018, , .		2
50	Characterization of head modulation during touchdown process using magnetic spacing sensitivity analysis. Microsystem Technologies, 2021, 27, 2453-2459.	2.0	1
51	Jacobian matrix singularity based pareto front identification for multi-objective problems. , 2013, , .		0
52	Laplacian graph based approach for uncertainty quantification of large scale dynamical systems. , 2015, , .		0
53	Probabilistic Factor Graph Based Approach for Automatic Material Assignments to Three-Dimensional Objects. Journal of Mechanical Design, Transactions of the ASME, 2017, 139, .	2.9	0
54	Joint Identification and Control in Hybrid Linear Systems. IFAC-PapersOnLine, 2020, 53, 1084-1089.	0.9	0

#	ARTICLE	IF	CITATIONS
55	An Optimization Framework for Operational-Level Resource Composition in an Inclusive Manufacturing System. Journal of Computing and Information Science in Engineering, 2022, 22, .	2.7	0