

David W Rosen

List of Publications by Year in descending order

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119
papers

6,073
citations

159525

30
h-index

168321

53
g-index

128
all docs

128
docs citations

128
times ranked

5201
citing authors

#	ARTICLE	IF	CITATIONS
1	Additive Manufacturing Technologies. , 2015, , .		1,276
2	Additive Manufacturing Technologies. , 2010, , .		1,222
3	Computer-Aided Design for Additive Manufacturing of Cellular Structures. Computer-Aided Design and Applications, 2007, 4, 585-594.	0.4	290
4	Design for Additive Manufacturing of Cellular Structures. Computer-Aided Design and Applications, 2008, 5, 686-696.	0.4	234
5	Refined metrics for measuring ideation effectiveness. Design Studies, 2009, 30, 737-743.	1.9	148
6	The effects of biological examples in idea generation. Design Studies, 2010, 31, 169-186.	1.9	139
7	Research supporting principles for design for additive manufacturing. Virtual and Physical Prototyping, 2014, 9, 225-232.	5.3	138
8	Additive manufacturing of metallic cellular materials via three-dimensional printing. International Journal of Advanced Manufacturing Technology, 2011, 53, 231-239.	1.5	119
9	Heuristic optimization method for cellular structure design of light weight components. International Journal of Precision Engineering and Manufacturing, 2013, 14, 1071-1078.	1.1	111
10	The Roadmap for Additive Manufacturing and Its Impact. 3D Printing and Additive Manufacturing, 2014, 1, 6-9.	1.4	101
11	Direct Digital Manufacturing. , 2010, , 378-399.		87
12	Machine learning integrated design for additive manufacturing. Journal of Intelligent Manufacturing, 2022, 33, 1073-1086.	4.4	83
13	Effects of material properties on warpage in fused deposition modeling parts. International Journal of Advanced Manufacturing Technology, 2018, 95, 2059-2070.	1.5	81
14	An Inductive Design Exploration Method for Robust Multiscale Materials Design. Journal of Mechanical Design, Transactions of the ASME, 2008, 130, .	1.7	79
15	A comparison of synthesis methods for cellular structures with application to additive manufacturing. Rapid Prototyping Journal, 2010, 16, 275-283.	1.6	77
16	Building around inserts: methods for fabricating complex devices in stereolithography. Rapid Prototyping Journal, 2001, 7, 253-262.	1.6	74
17	Layered Manufacturing: Current Status and Future Trends. Journal of Computing and Information Science in Engineering, 2001, 1, 60-71.	1.7	74
18	Design for Additive Manufacturing. , 2010, , 299-332.		70

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19	Usage of accuracy models in stereolithography process planning. Rapid Prototyping Journal, 2000, 6, 77-87.	1.6	69
20	Collaborative multidisciplinary decision making using game theory and design capability indices. Research in Engineering Design - Theory, Applications, and Concurrent Engineering, 2005, 16, 57-72.	1.2	69
21	A Functional Classification Framework for the Conceptual Design of Additive Manufacturing Technologies. Journal of Mechanical Design, Transactions of the ASME, 2011, 133, .	1.7	67
22	A Design for Additive Manufacturing Ontology. Journal of Computing and Information Science in Engineering, 2017, 17, .	1.7	67
23	The size matching and scaling method: a synthesis method for the design of mesoscale cellular structures. International Journal of Computer Integrated Manufacturing, 2013, 26, 907-927.	2.9	61
24	Modeling effects of oxygen inhibition in mask-based stereolithography. Rapid Prototyping Journal, 2011, 17, 168-175.	1.6	60
25	Computer-aided build style decision support for stereolithography. Rapid Prototyping Journal, 1998, 4, 4-13.	1.6	48
26	On combinatorial design spaces for the configuration design of product families. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2001, 15, 91-108.	0.7	48
27	A review of synthesis methods for additive manufacturing. Virtual and Physical Prototyping, 2016, 11, 305-317.	5.3	48
28	Design for Additive Manufacturing: Past, Present, and Future Directions. Journal of Mechanical Design, Transactions of the ASME, 2014, 136, .	1.7	47
29	Data-Driven Design Space Exploration and Exploitation for Design for Additive Manufacturing. Journal of Mechanical Design, Transactions of the ASME, 2019, 141, .	1.7	44
30	A Design for Additive Manufacturing Ontology to Support Manufacturability Analysis. Journal of Computing and Information Science in Engineering, 2019, 19, .	1.7	41
31	Design and additive manufacture of functionally graded structures based on digital materials. Additive Manufacturing, 2019, 30, 100839.	1.7	40
32	3D printing of multi-material composites with tunable shape memory behavior. Materials and Design, 2020, 193, 108785.	3.3	36
33	A Multilevel Upscaling Method for Material Characterization of Additively Manufactured Part Under Uncertainties. Journal of Mechanical Design, Transactions of the ASME, 2015, 137, .	1.7	33
34	Vat Photopolymerization Processes. , 2015, , 63-106.		33
35	A Distributed Product Realization Environment for Design and Manufacturing. Journal of Computing and Information Science in Engineering, 2001, 1, 235-244.	1.7	32
36	Use of parameter estimation for stereolithography surface finish improvement. Rapid Prototyping Journal, 2008, 14, 213-220.	1.6	32

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37	Development of Additive Manufacturing Technology. , 2010, , 36-58.		31
38	A phase evolution based constitutive model for shape memory polymer and its application in 4D printing. Smart Materials and Structures, 2020, 29, 055016.	1.8	30
39	What controls dynamics of droplet shape evolution upon impingement on a solid surface?. AICHE Journal, 2013, 59, 3071-3082.	1.8	29
40	Materials for Additive Manufacturing. , 2021, , 379-428.		29
41	Stereolithography cure modelling and simulation. International Journal of Materials and Product Technology, 2004, 21, 255.	0.1	24
42	Lattice Boltzmann simulations of multiple-droplet interaction dynamics. Physical Review E, 2014, 89, 033311.	0.8	24
43	Sheet Lamination Processes. , 2010, , 223-252.		24
44	Compensation zone approach to avoid print-through errors in mask projection stereolithography builds. Rapid Prototyping Journal, 2006, 12, 283-291.	1.6	22
45	A configuration design based method for platform commonization for product families. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2004, 18, 21-39.	0.7	19
46	A Method for Integrating Form Errors Into Geometric Tolerance Analysis. Journal of Mechanical Design, Transactions of the ASME, 2008, 130, .	1.7	19
47	A Reverse Glue Approach to Automated Construction of Multi-Piece Molds. Journal of Computing and Information Science in Engineering, 2003, 3, 219-230.	1.7	18
48	Geometric Tailoring: A Design for Manufacturing Method for Rapid Prototyping and Rapid Tooling. Journal of Mechanical Design, Transactions of the ASME, 2004, 126, 571-580.	1.7	18
49	Design for Additive Manufacturing. , 2021, , 555-607.		18
50	The rapid tooling testbed: a distributed design-for-manufacturing system. Rapid Prototyping Journal, 2003, 9, 122-132.	1.6	17
51	Introduction and Basic Principles. , 2010, , 20-35.		17
52	Extrusion-Based Systems. , 2010, , 160-186.		17
53	Feature-based design: Four hypotheses for future CAD systems. Research in Engineering Design - Theory, Applications, and Concurrent Engineering, 1993, 5, 125-139.	1.2	15
54	Effect of Process Parameters on Burrs Produced in Micromilling of a Thin Nitinol Foil. Journal of Micro and Nano-Manufacturing, 2013, 1, .	0.8	15

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55	Design and Manufacturing Implications of Additive Manufacturing. Journal of Materials Engineering and Performance, 2021, 30, 6426-6438.	1.2	15
56	Photopolymerization Processes. , 2010, , 78-119.		15
57	Towards computer-aided configuration design for the life cycle. Journal of Intelligent Manufacturing, 1996, 7, 145.	4.4	14
58	Voxel design of additively manufactured digital material with customized thermomechanical properties. Materials and Design, 2021, 197, 109205.	3.3	13
59	Features and Algorithms for Tooling Cost Evaluation in Injection Molding and Die Casting. , 1992, , .		13
60	Selection for Rapid Manufacturing Under Epistemic Uncertainty. , 2005, , 451.		12
61	A repository for DFM problems using description logics. Journal of Manufacturing Technology Management, 2008, 19, 755-774.	3.3	12
62	Shape evolution of multiple interacting droplets in inkjet deposition. Rapid Prototyping Journal, 2015, 21, 373-385.	1.6	12
63	Parametric Modeling Method for Truss Structures. , 2002, , 759.		11
64	Material removal during abrasive impregnated brush deburring of micromilled grooves in NiTi foils. International Journal of Machine Tools and Manufacture, 2013, 72, 37-49.	6.2	11
65	Ontology Based Knowledge Modeling and Reuse Approach of Supporting Process Planning in Layer-Based Additive Manufacturing. , 2010, , .		10
66	Bayesian inference-based decision of fatigue life model for metal additive manufacturing considering effects of build orientation and post-processing. International Journal of Fatigue, 2022, 155, 106535.	2.8	10
67	Material Jetting. , 2021, , 203-235.		10
68	Computers in Education: Activities, Contributions, and Future Trends. Journal of Computing and Information Science in Engineering, 2005, 5, 257-263.	1.7	9
69	Micromachined Ultrasonic Print-Head for Deposition of High-Viscosity Materials. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2010, 132, .	1.3	9
70	Medical Applications for Additive Manufacture. , 2010, , 400-414.		8
71	Modeling of light field effect in deep vat polymerization for grayscale lithography application. Additive Manufacturing, 2020, 36, 101595.	1.7	8
72	Printing Processes. , 2010, , 187-222.		7

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73	Ontology based knowledge modeling and reuse approach in product redesign. , 2010, , .		7
74	Two-Dimensional Real-Time Interferometric Monitoring System for Exposure Controlled Projection Lithography. , 2012, , .		7
75	A Design for Additive Manufacturing Ontology to Support Manufacturability Analysis. , 2018, , .		7
76	Morphable components topology optimization for additive manufacturing. Structural and Multidisciplinary Optimization, 2020, 62, 19-39.	1.7	7
77	Powder Bed Fusion Processes. , 2010, , 120-159.		7
78	Pump Design for a Portable Renal Replacement System. Journal of Medical Devices, Transactions of the ASME, 2011, 5, .	0.4	6
79	Material Jetting. , 2015, , 175-203.		6
80	Material feature representation and identification with composite surfacelets. Journal of Computational Design and Engineering, 2016, 3, 370-384.	1.5	6
81	Stereolithography and Rapid Prototyping. , 2008, , 175-196.		6
82	Geometric Tailoring: A Design for Manufacturing Method for Rapid Prototyping and Rapid Tooling. , 2002, , 149.		5
83	Description Logic Representation of Finite Element Analysis Models for Automated Retrieval. Journal of Computing and Information Science in Engineering, 2008, 8, .	1.7	5
84	Customer Co-design of Computer Mouse for Mass Customization without Causing Mass Confusion. , 2010, , .		5
85	Droplet impingement dynamics in ink-jet deposition. Virtual and Physical Prototyping, 2012, 7, 49-64.	5.3	5
86	A simple, inexpensive, real-time interferometric cure monitoring system for optically cured polymers. Journal of Applied Polymer Science, 2013, 129, 2653-2662.	1.3	5
87	Experimental validation and characterization of a real-time metrology system for photopolymerization-based stereolithographic additive manufacturing process. International Journal of Advanced Manufacturing Technology, 2017, 91, 1255-1273.	1.5	5
88	Design-to-Manufacture Information Transfer in the Context of Solid Freeform Fabrication Technologies. , 2000, , 167-196.		5
89	Form-Finding and Structural Shape Optimization of the Metal 3DPrinted Multi-Branch Node with Complex Geometry. Computer-Aided Design and Applications, 2019, 17, 205-225.	0.4	5
90	Inverse Surfacelet Transform for Image Reconstruction With Constrained-Conjugate Gradient Methods. Journal of Computing and Information Science in Engineering, 2014, 14, .	1.7	4

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91	A Multiscale Materials Modeling Method With Seamless Zooming Capability Based on Surfacelets1. Journal of Computing and Information Science in Engineering, 2017, 17, .	1.7	4
92	A Product Family Design Method for Configuration and Spatial Layout Requirements. Journal of Computing and Information Science in Engineering, 2019, 19, .	1.7	4
93	Vat Photopolymerization. , 2021, , 77-124.		4
94	Release behavior for powder injection molding in stereolithography molds. Rapid Prototyping Journal, 2001, 7, 115-121.	1.6	3
95	Case-Based Retrieval Approach of Supporting Process Planning in Layer-Based Additive Manufacturing. , 2007, , 841.		3
96	Design of a Portable Renal Replacement System Through Modeling and Experiment. , 2009, , .		3
97	A Process Planning Method for Thin Film Mask Projection Micro-Stereolithography. , 2009, , .		3
98	The Size Matching and Scaling Method: A Synthesis Method for the Design of Mesoscale Cellular Structures. , 2010, , .		3
99	Exposure controlled projection lithography for microlens fabrication. Proceedings of SPIE, 2012, , .	0.8	3
100	Process modeling and advanced control methods for Exposure Controlled Projection Lithography. , 2015, , .		3
101	Design and Manufacturing Implications of Additive Manufacturing. , 2020, , 19-29.		3
102	A Framework for Self-Realizing Process Models for Additive Manufacturing. , 2011, , .		2
103	Multiscale, Heterogeneous Computer Aided Design Representation for Metal Alloy Microstructures. Journal of Computing and Information Science in Engineering, 2014, 14, .	1.7	2
104	A characterization method for mechanical properties of metal powder bed fusion parts. International Journal of Advanced Manufacturing Technology, 2020, 108, 1189-1201.	1.5	2
105	Common Platform Architecture. , 2003, , 163-182.		2
106	Post-Processing. , 2010, , 415-435.		2
107	A MODIFIED PATTERN SEARCH METHOD WITH RELAXED LEXICOGRAPHIC MINIMIZATION FOR ENGINEERING DESIGN. Engineering Optimization, 1999, 32, 219-247.	1.5	1
108	Simulation of Mating Between Non-Analytic Surfaces Using a Mathematical Programming Formulation. , 2005, , 179.		1

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109	Simulation Methods for Stereolithography. , 2011, , 183-207.		1
110	Reusability-based selection of parametric finite element analysis models. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2009, 23, 197-214.	0.7	0
111	Employing Rapid Prototyping biomedical model to assist the surgical planning of defect mandibular reconstruction. , 2010, , .		0
112	Pump Design for a Portable Renal Replacement System. , 2010, , .		0
113	Customized Titanium Plate Virtual Design and Deformation Simulation Analysis of Human Lateral Mandible Defect. Applied Mechanics and Materials, 2012, 157-158, 227-230.	0.2	0
114	Computer-Aided Design for Product De- and Remanufacture. Journal of Design and Manufacturing Automation, 2001, 1, 137-154.	0.2	0
115	The Systems Realization Laboratory, Georgia Institute of Technology. , 2005, , 490-493.		0
116	Direct Write Technologies. , 2010, , 275-298.		0
117	A Hierarchical, Heterogeneous CAD Modeling Approach. , 2011, , .		0
118	An Empirical Model for the Prediction of Hemodialysis System Performance. , 2011, , .		0
119	Modeling for Polymer Additive Manufacturing Processes. , 2020, , 69-78.		0