Harrison M Kim

List of Publications by Year
in descending order

130 papers	2,469 citations	257450 24 h-index	214800 47 g-index
131 all docs	131 docs citations	131 times ranked	1360 citing authors

#	Article	IF	Citations
1	Target Cascading in Optimal System Design. Journal of Mechanical Design, Transactions of the ASME, 2003, 125, 474-480.	2.9	413
2	Integrated Sustainable Life Cycle Design: A Review. Journal of Mechanical Design, Transactions of the ASME, 2010, 132, .	2.9	253
3	Analytical Target Cascading in Automotive Vehicle Design. Journal of Mechanical Design, Transactions of the ASME, 2003, 125, 481-489.	2.9	211
4	Target cascading in vehicle redesign: a class VI truck study. International Journal of Vehicle Design, 2002, 29, 199.	0.3	108
5	Extension of the target cascading formulation to the design of product families. Structural and Multidisciplinary Optimization, 2002, 24, 293-301.	3.5	91
6	Probabilistic Analytical Target Cascading: A Moment Matching Formulation for Multilevel Optimization Under Uncertainty. Journal of Mechanical Design, Transactions of the ASME, 2006, 128, 991.	2.9	88
7	Lagrangian Coordination for Enhancing the Convergence of Analytical Target Cascading. AIAA Journal, 2006, 44, 2197-2207.	2.6	78
8	Green profit maximization through integrated pricing and production planning for a line of new and remanufactured products. Journal of Cleaner Production, 2017, 142, 3454-3470.	9.3	56
9	Data-Driven Decision Tree Classification for Product Portfolio Design Optimization. Journal of Computing and Information Science in Engineering, 2009, 9, .	2.7	47
10	Product family architecture design with predictive, data-driven product family design method. Research in Engineering Design - Theory, Applications, and Concurrent Engineering, 2016, 27, 5-21.	2.1	47
11	Simultaneous Selective Disassembly and End-of-Life Decision Making for Multiple Products That Share Disassembly Operations. Journal of Mechanical Design, Transactions of the ASME, 2010, 132, .	2.9	44
12	Trend Mining for Predictive Product Design. Journal of Mechanical Design, Transactions of the ASME, 2011, 133, .	2.9	44
13	Demand Trend Mining for Predictive Life Cycle Design. Journal of Cleaner Production, 2014, 68, 189-199.	9.3	44
14	Assessing product family design from an end-of-life perspective. Engineering Optimization, 2011, 43, 233-255.	2.6	41
15	Addressing supply-side risk in uncertain power markets: stochastic Nash models, scalable algorithms and error analysis. Optimization Methods and Software, 2013, 28, 1095-1138.	2.4	40
16	Analytical Target Setting: An Enterprise Context in Optimal Product Design. Journal of Mechanical Design, Transactions of the ASME, 2006, 128, 4-13.	2.9	39
17	Design for life-cycle profit with simultaneous consideration of initial manufacturing and end-of-life remanufacturing. Engineering Optimization, 2015, 47, 18-35.	2.6	37
18	Optimal Product Portfolio Formulation by Merging Predictive Data Mining With Multilevel Optimization. Journal of Mechanical Design, Transactions of the ASME, 2008, 130, .	2.9	34

#	Article	IF	Citations
19	Market Positioning of Remanufactured Products With Optimal Planning for Part Upgrades. Journal of Mechanical Design, Transactions of the ASME, 2013, 135, .	2.9	32
20	Evaluating End-of-Life Recovery Profit by a Simultaneous Consideration of Product Design and Recovery Network Design. Journal of Mechanical Design, Transactions of the ASME, 2010, 132, .	2.9	31
21	Automated Keyword Filtering in Latent Dirichlet Allocation for Identifying Product Attributes From Online Reviews. Journal of Mechanical Design, Transactions of the ASME, 2021, 143, .	2.9	30
22	Target Exploration for Disconnected Feasible Regions in Enterprise-Driven Multilevel Product Design. AIAA Journal, 2006, 44, 67-77.	2.6	29
23	A Systematic Methodology Based on Word Embedding for Identifying the Relation Between Online Customer Reviews and Sales Rank. Journal of Mechanical Design, Transactions of the ASME, 2018, 140, .	2.9	28
24	Varying Lifecycle Lengths Within a Product Take-Back Portfolio. Journal of Mechanical Design, Transactions of the ASME, 2010, 132, .	2.9	25
25	Approach for Importanceâ€“Performance Analysis of Product Attributes From Online Reviews. Journal of Mechanical Design, Transactions of the ASME, 2021, 143, .	2.9	24
26	A Regularized Inexact Penalty Decomposition Algorithm for Multidisciplinary Design Optimization Problems With Complementarity Constraints. Journal of Mechanical Design, Transactions of the ASME, 2010, 132, .	2.9	23
27	Strategic behavior in power markets under uncertainty. Energy Systems, 2011, 2, 115-141.	3.0	22
28	Continuous Preference Trend Mining for Optimal Product Design With Multiple Profit Cycles. Journal of Mechanical Design, Transactions of the ASME, 2014, 136, .	2.9	22
29	Optimal component sharing in a product family by simultaneous consideration of minimum description length and impact metric. Engineering Optimization, 2011, 43, 175-192.	2.6	21
30	A ReliefF attribute weighting and X-means clustering methodology for top-down product family optimization. Engineering Optimization, 2010, 42, 593-616.	2.6	20
31	Formulating Second-Hand Market Value as a Function of Product Specifications, Age, and Conditions. Journal of Mechanical Design, Transactions of the ASME, 2012, 134, .	2.9	20
32	A Data-Driven Approach to Product Usage Context Identification From Online Customer Reviews. Journal of Mechanical Design, Transactions of the ASME, 2019, 141, .	2.9	20
33	A Data-Driven Methodology to Construct Customer Choice Sets Using Online Data and Customer Reviews. Journal of Mechanical Design, Transactions of the ASME, 2019, 141, .	2.9	19
34	Research perspectives in ecodesign. Design Science, 2020, 6, .	2.1	19
35	E-Waste Stream Analysis and Design Implications. Journal of Mechanical Design, Transactions of the ASME, 2011, 133, .	2.9	16
36	Probabilistic Analytical Target Cascading: A Moment Matching Formulation for Multilevel Optimization Under Uncertainty. , 2005, , 1173.		15

#	Article	IF	Citations
37	Designing optimal COVID-19 testing stations locally: A discrete event simulation model applied on a university campus. PLoS ONE, 2021, 16, e0253869.	2.5	15
38	Explainable neural network-based approach to Kano categorisation of product features from online reviews. International Journal of Production Research, 2022, 60, 7053-7073.	7.5	14
39	Predictive Model Selection for Forecasting Product Returns. Journal of Mechanical Design, Transactions of the ASME, 2016, 138, .	2.9	11
40	Optimal manure utilization chain for distributed animal farms: Model development and a case study from Hangzhou, China. Agricultural Systems, 2021, 187, 102996.	6.1	11
41	Optimal design of manure management for intensive swine feeding operation: A modeling method based on analytical target cascading. Journal of Cleaner Production, 2021, 282, 124550.	9.3	11
42	Hybrid Power/Energy Generation Through Multidisciplinary and Multilevel Design Optimization With Complementarity Constraints. Journal of Mechanical Design, Transactions of the ASME, 2010, 132, .	2.9	10
43	Impact of Generational Commonality of Short Life Cycle Products in Manufacturing and Remanufacturing Processes. Journal of Mechanical Design, Transactions of the ASME, 2020, 142, .	2.9	10
44	Predictive usage mining for life cycle assessment. Transportation Research, Part D: Transport and Environment, 2015, 38, 125-143.	6.8	9
45	Modeling the Time-Varying Advantages of a Remanufactured Product: Is â€œRemanâ€•Better Than â€œBrand Newâ€?1. Journal of Mechanical Design, Transactions of the ASME, 2016, 138, .	2.9	9
46	Assessing the environmental and economic sustainability of autonomous systems: A case study in the agricultural industry. Procedia CIRP, 2020, 90, 209-214.	1.9	9
47	Comparative life cycle assessment and costing of an autonomous lawn mowing system with human-operated alternatives: implication for sustainable design improvements. International Journal of Sustainable Engineering, 2021, 14, 704-724.	3.5	9
48	Optimal Modular Remanufactured Product Configuration and Harvesting Planning for End-of-Life Products. Journal of Mechanical Design, Transactions of the ASME, 2022, 144, .	2.9	9
49	Economic and Environmental Impacts of Product Service Lifetime: A Life-Cycle Perspective. Lecture Notes in Production Engineering, 2013, , 177-189.	0.4	9
50	Incorporating security considerations into optimal product architecture and component sharing decision in product family design. Engineering Optimization, 2012, 44, 55-74.	2.6	8
51	Wind farm layout design optimization through multi-scenario decomposition with complementarity constraints. Engineering Optimization, 2014, 46, 1669-1693.	2.6	8
52	Greedy robust wind farm layout optimization with feasibility guarantee. Engineering Optimization, 2019, 51, 1152-1167.	2.6	8
53	Designing an Optimal Modular-Based Product Family Under Intellectual Property and Sustainability Considerations. Journal of Mechanical Design, Transactions of the ASME, 2021, 143, .	2.9	8
54	Phrase Embedding and Clustering for Sub-Feature Extraction From Online Data. Journal of Mechanical Design, Transactions of the ASME, 2022, 144, .	2.9	8

#	Article	IF	Citations
55	Target Feasibility Achievement in Enterprise-Driven Hierarchical Multidisciplinary Design. , 2004, , .		7
56	System of Systems Optimization by Pseudo-Hierarchical Multistage Model. , 2006, , .		7
57	COMPARING LIFE CYCLE IMPACT ASSESSMENT, CIRCULARITY AND SUSTAINABILITY INDICATORS FOR SUSTAINABLE DESIGN: RESULTS FROM A HANDS-ON PROJECT WITH 87 ENGINEERING STUDENTS. Proceedings of the Design Society, 2021, 1, 681-690.	0.8	7
58	Framing Product Circularity Performance for Optimized Green Profit. , 2019, , .		7
59	Circular economy as a key for industrial value chain resilience in a post-COVID world: what do future engineers think?. Procedia CIRP, 2021, 103, 26-31.	1.9	7
60	A Discrete Event Simulation-Based Model to Optimally Design and Dimension Mobile COVID-19 Saliva-Based Testing Stations. Simulation in Healthcare, 2021, 16, 151-152.	1.2	6
61	Parallel, Multistage Model for Enterprise System Planning and Design. IEEE Systems Journal, 2010, 4, 6-14.	4.6	5
62	Quantification of the environmental and economic benefits of the electrification of lawn mowers on the US residential market. International Journal of Life Cycle Assessment, 2021, 26, 1267-1284.	4.7	5
63	Analytical Target Cascading in Product Family Design. , 2006, , 225-240.		5
64	Nexus Between Life Cycle Assessment, Circularity, and Sustainability Indicatorsâ€”Part I: a Review. Circular Economy and Sustainability, 2022, 2, 1143-1156.	5.5	5
65	Multilevel Optimization for Enterprise Driven Decision-Based Product Design. , 2006, , .		4
66	Analytical Target Cascading for Multi-Mode Design Optimization: An Engine Case Study. , 2008, , .		4
67	Life Cycle Assessment of Complex Heavy Duty Equipment. , 2012, , .		4
68	A Mixed Integer Linear Programing Formulation for Unrestricted Wind Farm Layout Optimization. Journal of Mechanical Design, Transactions of the ASME, 2016, 138, .	2.9	4
69	Analytical Target Setting: An Enterprise Context in Optimal Product Design. , 2003, , .		4
70	Improving the Accuracy and Diversity of Feature Extraction From Online Reviews Using Keyword Embedding and Two Clustering Methods. , 2020, , .		4
71	Analysis of Dynamic Changes in Customer Sentiment on Product Features After the Outbreak of COVID-19 Based on Online Reviews. Journal of Mechanical Design, Transactions of the ASME, 2022, 144, .	2.9	4
72	Lagrangian Coordination for Enhancing the Convergence of Analytical Target Cascading. , 2006, , .		3

#	Article	IF	Citations
73	Varying Lifecycle Lengths Within a Portfolio for Product Take-Back. , 2009, , .		3
74	A tight upper bound for quadratic knapsack problems in grid-based wind farm layout optimization. Engineering Optimization, 2018, 50, 367-381.	2.6	3
75	Automatic Identification of Product Usage Contexts from Online Customer Reviews. Proceedings of the Design Society International Conference on Engineering Design, 2019, 1, 2507-2516.	0.6	3
76	Comparative Life Cycle Assessment of Complex Heavy-Duty Off-Road Equipment. , 2012, , .		3
77	Multilevel Optimization Considering Variability in Design Variables of Multidisciplinary System. , 2006, , .		2
78	3.1.1 System of Systems Engineering Model by Multistage Analytical Target Cascading. Incose International Symposium, 2007, 17, 409-423.	0.6	2
79	Product Family Concept Generation and Validation Through Predictive Decision Tree Data Mining and Multi-Level Optimization. , 2007, , .		2
80	A Comparative Study of Data-Intensive Demand Modeling Techniques in Relation to Product Design and Development. , 2009, , .		2
81	Incorporating Security Considerations Into Optimal Product Architecture and Component Sharing Decision in Product Family Design. , 2010, , .		2
82	Pre-Life and End-of-Life Combined Profit Optimization With Predictive Product Lifecycle Design. , 2012, , .		2
83	Impact of Generational Commonality of Short-Life Cycle Products in Manufacturing and Remanufacturing Processes. Proceedings of the Design Society International Conference on Engineering Design, 2019, 1, 3331-3340.	0.6	2
84	Multiple Target Exploration Approach for Design Exploration Using a Swarm Intelligence and Clustering. Journal of Mechanical Design, Transactions of the ASME, 2019, 141, .	2.9	2
85	Two-Stage System of Systems Model by Linking System Design With Resource Allocation. , 2006, , .		2
86	Importance-Performance Analysis of Product Attributes Using Explainable Deep Neural Network From Online Reviews. , 2020, , .		2
87	Optimal Product Family Architecture Design and Commonality Decision for Sustainability and Intellectual Property Protection. , 2020, , .		2
88	A Regularized Inexact Penalty Decomposition Algorithm for Multidisciplinary Design Optimization Problem With Complementarity Constraints. , 2009, , .		2
89	Nexus Between Life Cycle Assessment, Circularity and Sustainability Indicatorsâ€"Part II: Experimentations. Circular Economy and Sustainability, 2022, 2, 1399-1424.	5.5	2
90	Optimal Product Portfolio Formulation: Merging Predictive Data Mining with Analytical Target Cascading. , 2006, , .		1

#	Article	IF	Citations
91	Selective Disassembly and Simultaneous End-of-Life Decision Making for Multiple Products. , 2009, , .		1
92	Trending Mining for Predictive Product Design. , 2010, , .		1
93	Continuous Preference Trend Mining for Optimal Product Design With Multiple Profit Cycles. , 2013, , .		1
94	Green Profit Maximization Through Joint Pricing and Production Planning of New and Remanufactured Products. , 2013, , .		1
95	Identifying the Relations Between Product Features and Sales Rank From Online Reviews. , 2016, , .		1
96	Identifying Sentiment-Dependent Product Features from Online Reviews. , 2017, , 685-701.		1
97	A Weighted Set Cover Problem for Product Family Design to Maximize the Commonality of Products. Proceedings of the Design Society International Conference on Engineering Design, 2019, 1, 2951-2960.	0.6	1
98	Multi-tool methodology to evaluate action levers to close the loop on critical materials â€“ Application to precious metals used in catalytic converters. Sustainable Production and Consumption, 2021, 26, 999-1010.	11.0	1
99	Sustainable Product Design by a Simultaneous Consideration of Pre-Life and End-of-Life of Products. , 2009, , .		1
100	A Functionallyâ€“Aware Product Schematic Clustering Algorithm. , 2012, , .		1
101	Predictive Usage Mining for Sustainability of Complex Systems Design. , 2014, , .		1
102	Switching From Petroleum- to Bio-Based Plastics: Visualization Tools to Screen Sustainable Material Alternatives During the Design Process. , 2020, , .		1
103	Combining life cycle assessment and online customer reviews to design more sustainable products - Case study on a printing machine. Procedia CIRP, 2022, 109, 604-609.	1.9	1
104	Product Architecture Design and Reconfiguration using Expectation Maximization and Decision Tree Classification. , 2008, , .		0
105	Multidisciplinary and Multilevel Design Optimization Problems with Equilibrium Constraints. , 2008, , .		0
106	Data-Mining Driven Reconfigurable Product Family Design Framework for Aerodynamic Particle Separators. , 2008, , .		0
107	Parallel, multistage model for enterprise system of systems. , 2008, , .		0
108	Capturing Emergent Behavior In Multi-Response Systems Through Data Trend Mining. , 2010, , .		0

#	Article	IF	Citations
109	Effect of Product Design on Buyback Price of End-of-Use Consumer Electronics. , 2010, , .		0
110	E-Waste Stream Analysis and Design Implications. , 2010, , .		0
111	Design Optimization of Hybrid Power/Energy Generation Systems with Diesel Backups through Multistage Optimization With Complementarity Constraints. , 2010, , .		0
112	Market-Driven Positioning of Remanufactured Product for Design for Remanufacturing With Part Upgrade. , 2011, , .		0
113	Hybrid Power Generation System Design Optimization Based on a Markovian Reliability Analysis Approach. , 2011, , .		0
114	To Extend, or to Shorten: Optimal Lifetime Planning. , 2012, , .		0
115	Wind Farm Layout Design Optimization Through Multidisciplinary Design Optimization with Complementarity Constraints. , 2012, , .		0
116	Analytical Target Cascading for End-of-Life Recovery Management. , 2012, , .		0
117	Predictive, Data-Driven Product Family Design. , 2014, , .		0
118	Predictive Modeling of Product Returns for Remanufacturing. , 2015, , .		0
119	A Mixed Integer Linear Programming Formulation for Unrestricted Wind Farm Layout Optimization. , 2015, , .		0
120	A Tight Upper Bound for Grid-Based Wind Farm Layout Optimization. , 2016, , .		0
121	Optimization of Piping Supports and Supporting Structure. Journal of Pressure Vessel Technology, Transactions of the ASME, 2017, 139, .	0.6	0
122	Two Stage Mini-Max Algorithm for Grid-Based Wind Farm Layout Optimization. , 2017, , .		0
123	A Systematic Approach to Identifying a Set of Feasible Designs. , 2017, , .		0
124	Value of Bootstrapping Staged Deployment of Infrastructure: Case Study in Space Infrastructure Deployment. , 2017, , .		0
125	ANALYSIS OF CUSTOMER SENTIMENT ON PRODUCT FEATURES AFTER THE OUTBREAK OF CORONAVIRUS DISEASE (COVID-19) BASED ON ONLINE REVIEWS. Proceedings of the Design Society, 2021, 1, 457-466.	0.8	0
126	AN AUTOMATED METHOD TO CONDUCT IMPORTANCE-PERFORMANCE ANALYSIS OF PRODUCT ATTRIBUTES FROM ONLINE REVIEWS - AN EXTENSION WITH A CASE STUDY. Proceedings of the Design Society, 2021, 1, 417-426.	0.8	0

#	Article	IF	Citations
127	Pseudo-Hierarchical Multistage Model for System of Systems Design and Operations. , 2007, , .		0
128	Hybrid Power/Energy Generation System Design Through Multistage Design Optimization Problem With Complementarity Constraints. , 2010, , .		0
129	Product Family Design and Recovery for Lifecycle. , 2014, , 707-735.		0
130	Iteration Complexity of the Alternating Direction Method of Multipliers for Quasi-Separable Problems in Multi-Disciplinary Design Optimization. , 2014, , .		0