

# Kazuhiro Saitou

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

76  
papers

1,547  
citations

21  
h-index

37  
g-index

80  
ext. papers

1,782  
ext. citations

4  
avg, IF

5.18  
L-index

#	Paper	IF	Citations
76	Multi-material topology optimization using ordered SIMP interpolation. <i>Structural and Multidisciplinary Optimization</i> , <b>2017</b> , 55, 477-491	3.6	203
75	Continuum structural topology design with genetic algorithms. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2000</b> , 186, 339-356	5.7	149
74	Topology Synthesis of Multicomponent Structural Assemblies in Continuum Domains. <i>Journal of Mechanical Design, Transactions of the ASME</i> , <b>2011</b> , 133,	3	139
73	Multiobjective evolutionary optimization of periodic layered materials for desired wave dispersion characteristics. <i>Structural and Multidisciplinary Optimization</i> , <b>2006</b> , 31, 60-75	3.6	121
72	A Survey of Structural Optimization in Mechanical Product Development. <i>Journal of Computing and Information Science in Engineering</i> , <b>2005</b> , 5, 214-226	2.4	71
71	Multi-criteria decision-making for optimization of product disassembly under multiple situations. <i>Environmental Science &amp; Technology</i> , <b>2003</b> , 37, 5303-13	10.3	71
70	Topology optimization of thermally actuated compliant mechanisms considering time-transient effect. <i>Finite Elements in Analysis and Design</i> , <b>2004</b> , 40, 1317-1331	2.2	50
69	Design of Spring Coupling for High-Q High-Frequency MEMS Filters for Wireless Applications. <i>IEEE Transactions on Industrial Electronics</i> , <b>2009</b> , 56, 1022-1030	8.9	40
68	Multi-component topology and material orientation design of composite structures (MTO-C). <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2018</b> , 342, 438-457	5.7	39
67	A sensitivity-based commonality strategy for family products of mild variation, with application to automotive body structures. <i>Structural and Multidisciplinary Optimization</i> , <b>2004</b> , 27, 89-96	3.6	34
66	Multi-objective topology optimization of multi-component continuum structures via a Kriging-interpolated level set approach. <i>Structural and Multidisciplinary Optimization</i> , <b>2015</b> , 51, 733-748	3.6	33
65	Robust Design of RF-MEMS Cantilever Switches Using Contact Physics Modeling. <i>IEEE Transactions on Industrial Electronics</i> , <b>2009</b> , 56, 1012-1021	8.9	33
64	Lifetime Extension of RF MEMS Direct Contact Switches in Hot Switching Operations by Ball Grid Array Dimple Design. <i>IEEE Electron Device Letters</i> , <b>2007</b> , 28, 479-481	4.4	32
63	Topology Optimization of Multicomponent Beam Structure via Decomposition-Based Assembly Synthesis. <i>Journal of Mechanical Design, Transactions of the ASME</i> , <b>2005</b> , 127, 170	3	31
62	Robust design of flexible manufacturing systems using, colored Petri net and genetic algorithm. <i>Journal of Intelligent Manufacturing</i> , <b>2002</b> , 13, 339-351	6.7	31
61	Topology optimization of functionally-graded lattice structures with buckling constraints. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2019</b> , 354, 593-619	5.7	29
60	Configuration design of scalable reconfigurable manufacturing systems for part family. <i>International Journal of Production Research</i> , <b>2020</b> , 58, 2974-2996	7.8	29

59	Design Optimization of Vehicle Structures for Crashworthiness Using Equivalent Mechanism Approximations. <i>Journal of Mechanical Design, Transactions of the ASME</i> , <b>2005</b> , 127, 485-492	3	24
58	Gradient-based multi-component topology optimization for stamped sheet metal assemblies (MTO-S). <i>Structural and Multidisciplinary Optimization</i> , <b>2018</b> , 58, 83-94	3.6	22
57	Externally resonated linear microvibromotor for microassembly. <i>Journal of Microelectromechanical Systems</i> , <b>2000</b> , 9, 336-346	2.5	22
56	Decomposition-Based Assembly Synthesis for Structural Stiffness. <i>Journal of Mechanical Design, Transactions of the ASME</i> , <b>2003</b> , 125, 452-463	3	21
55	Decomposition-Based Assembly Synthesis of Space Frame Structures Using Joint Library. <i>Journal of Mechanical Design, Transactions of the ASME</i> , <b>2006</b> , 128, 57-65	3	16
54	Decomposition-Based Assembly Synthesis of a Three-Dimensional Body-in-White Model for Structural Stiffness. <i>Journal of Mechanical Design, Transactions of the ASME</i> , <b>2005</b> , 127, 34-48	3	16
53	ROTAS: a rotamer-dependent, atomic statistical potential for assessment and prediction of protein structures. <i>BMC Bioinformatics</i> , <b>2014</b> , 15, 307	3.6	14
52	Multicomponent Topology Optimization for Additive Manufacturing With Build Volume and Cavity Free Constraints. <i>Journal of Computing and Information Science in Engineering</i> , <b>2019</b> , 19,	2.4	13
51	Validation of stochastic traffic flow model with microscopic traffic simulation <b>2011</b> ,		13
50	Design for Disassembly With High-Stiffness Heat-Reversible Locator-Snap Systems. <i>Journal of Mechanical Design, Transactions of the ASME</i> , <b>2008</b> , 130,	3	12
49	Skin-Effect Self-Heating in Air-Suspended RF MEMS Transmission-Line Structures. <i>Journal of Microelectromechanical Systems</i> , <b>2006</b> , 15, 1622-1631	2.5	12
48	Replacement policy of residential lighting optimized for cost, energy, and greenhouse gas emissions. <i>Environmental Research Letters</i> , <b>2017</b> , 12, 114034	6.2	11
47	A Co-Evolutionary Approach for Design Optimization via Ensembles of Surrogates With Application to Vehicle Crashworthiness. <i>Journal of Mechanical Design, Transactions of the ASME</i> , <b>2012</b> , 134,	3	11
46	Optimal Subassembly Partitioning of Space Frame Structures for In-Process Dimensional Adjustability and Stiffness. <i>Journal of Mechanical Design, Transactions of the ASME</i> , <b>2006</b> , 128, 527-535	3	11
45	Decomposition-Based Assembly Synthesis for In-Process Dimensional Adjustability. <i>Journal of Mechanical Design, Transactions of the ASME</i> , <b>2003</b> , 125, 464-473	3	10
44	Evolutionary Black-Box Topology Optimization: Challenges and Promises. <i>IEEE Transactions on Evolutionary Computation</i> , <b>2020</b> , 24, 613-633	15.6	10
43	Automated Vehicle Structural Crashworthiness Design via a Crash Mode Matching Algorithm. <i>Journal of Mechanical Design, Transactions of the ASME</i> , <b>2011</b> , 133,	3	9
42	Three-Dimensional Assembly Synthesis for Robust Dimensional Integrity Based on Screw Theory. <i>Journal of Mechanical Design, Transactions of the ASME</i> , <b>2006</b> , 128, 243-251	3	9

41	Off-line error prediction, diagnosis and recovery using virtual assembly systems. <i>Journal of Intelligent Manufacturing</i> , <b>2004</b> , 15, 679-692	6.7	9
40	Design optimization of N-shaped roof trusses using reactive taboo search. <i>Applied Soft Computing Journal</i> , <b>2003</b> , 3, 221-235	7.5	9
39	Automated Optimal Design of Mechanical Conformational Switches. <i>Artificial Life</i> , <b>1995</b> , 2, 129-156	1.4	9
38	Real-Time Traffic Prediction and Probing Strategy for Lagrangian Traffic Data. <i>IEEE Transactions on Intelligent Transportation Systems</i> , <b>2019</b> , 20, 497-506	6.1	8
37	On optimal dynamic pegging in rescheduling for new order arrival. <i>Computers and Industrial Engineering</i> , <b>2019</b> , 136, 46-56	6.4	8
36	Distance-preserving rigidity penalty on deformable image registration of multiple skeletal components in the neck. <i>Medical Physics</i> , <b>2013</b> , 40, 121907	4.4	8
35	Automated generation of robust error recovery logic in assembly systems using genetic programming. <i>Journal of Manufacturing Systems</i> , <b>2001</b> , 20, 55-68	9.1	8
34	Topology optimization of composite structures with data-driven resin filling time manufacturing constraint. <i>Structural and Multidisciplinary Optimization</i> , <b>2017</b> , 55, 2073-2086	3.6	7
33	Multi-component topology optimization for die casting (MTO-D). <i>Structural and Multidisciplinary Optimization</i> , <b>2019</b> , 60, 2265-2279	3.6	7
32	High-Stiffness, Lock-and-Key Heat-Reversible Locator-Snap Systems for the Design for Disassembly. <i>Journal of Mechanical Design, Transactions of the ASME</i> , <b>2009</b> , 131,	3	6
31	Variation Analysis of Three Dimensional non-rigid Assemblies <b>2007</b> ,		6
30	Subassembly generation via mechanical conformational switches. <i>Artificial Life</i> , <b>1995</b> , 2, 377-416	1.4	6
29	Multi-Component Topology Optimization for Powder Bed Additive Manufacturing (MTO-A) <b>2018</b> ,		6
28	Gradient-Based Multi-Component Topology Optimization for Additive Manufacturing (MTO-A) <b>2017</b> ,		5
27	Assembly synthesis with subassembly partitioning for optimal in-process dimensional adjustability. <i>Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM</i> , <b>2007</b> , 21, 31-43	1.3	5
26	Stochastic Lagrangian Traffic flow modeling and real-time traffic prediction <b>2016</b> ,		4
25	Optimal Integration of Alternative Energy Sources in Production Systems With Customer Demand Forecast. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2016</b> , 13, 206-214	4.9	4
24	Tunable machine vision-based strategy for automated annotation of chemical databases. <i>Journal of Chemical Information and Modeling</i> , <b>2009</b> , 49, 1993-2001	6.1	4

23	Design of part family robust-to-production plan variations based on quantitative manufacturability evaluation. <i>Research in Engineering Design - Theory, Applications, and Concurrent Engineering</i> , <b>2002</b> , 13, 199-212	3.5	4
22	Prediction and Diagnosis of Propagated Errors in Assembly Systems Using Virtual Factories. <i>Journal of Computing and Information Science in Engineering</i> , <b>2001</b> , 1, 261-265	2.4	4
21	A finite element head and neck model as a supportive tool for deformable image registration. <i>International Journal of Computer Assisted Radiology and Surgery</i> , <b>2016</b> , 11, 1311-7	3.9	3
20	Optimization of probe vehicle deployment for traffic status estimation <b>2013</b> ,		3
19	Local compression in automated breast ultrasound in the mammographic geometry <b>2010</b> ,		3
18	Decomposition-Based Assembly Synthesis of Multiple Structures for Minimum Manufacturing Cost. <i>Journal of Mechanical Design, Transactions of the ASME</i> , <b>2005</b> , 127, 572-579	3	3
17	Anisotropic Multicomponent Topology Optimization for Additive Manufacturing With Build Orientation Design and Stress-Constrained Interfaces. <i>Journal of Computing and Information Science in Engineering</i> , <b>2021</b> , 21,	2.4	3
16	Design For Existing Lines: Part and Process Plan Optimization to Best Utilize Existing Production Lines. <i>Journal of Computing and Information Science in Engineering</i> , <b>2007</b> , 7, 126-131	2.4	2
15	Design for Fixturability (DFF) Methodology for Commodity Parts: A Case Study With Connecting Rod Designs. <i>Journal of Computing and Information Science in Engineering</i> , <b>2002</b> , 2, 21-27	2.4	2
14	Predictive-Reactive Rescheduling for New Order Arrivals with Optimal Dynamic Pegging <b>2020</b> ,		2
13	Optimal integration of alternative energy sources in production systems for minimum grid dependency and outage risk <b>2014</b> ,		1
12	Optimal outsourcing for intellectual property protection and production cost minimization <b>2009</b> ,		1
11	Optimal heat-reversible snap joints for frame-panel assembly in aluminium space frame automotive bodies. <i>International Journal of Sustainable Manufacturing</i> , <b>2009</b> , 1, 302	0.4	1
10	Decision support for optimal adaptation of product and supply chain systems based on real options theory <b>2009</b> ,		1
9	Adapting product and supply chain systems under severe uncertainty <b>2008</b> ,		1
8	Simultaneous Assembly Planning and Assembly System Design Using Multi-objective Genetic Algorithms. <i>Lecture Notes in Computer Science</i> , <b>2003</b> , 2096-2108	0.9	1
7	Multicomponent topology optimization of functionally graded lattice structures with bulk solid interfaces. <i>International Journal for Numerical Methods in Engineering</i> , <b>2021</b> , 122, 4219-4249	2.4	1
6	Large-Scale Three-Dimensional Anisotropic Topology Optimization of Variable-Axial Lightweight Composite Structures. <i>Journal of Mechanical Design, Transactions of the ASME</i> , <b>2022</b> , 144,	3	1

- 5 Design Optimization of Vehicle Structures for Crashworthiness via Equivalent Mechanism Approximations. *The Proceedings of Design & Systems Conference*, **2003**, 2003.13, 309-311 ○
- 4 Decomposition-based assembly synthesis of 3D Body-In-White models for structural stiffness. *The Proceedings of Design & Systems Conference*, **2003**, 2003.13, 347-350 ○
- 3 F12-(8) Design Optimization with Discrete Variables. *The Reference Collection of Annual Meeting*, **2005**, 2005.8, 232-234
- 2 Design Optimization with Discrete Variables. *Journal of the Society of Mechanical Engineers*, **2006**, 109, 392-394 ○
- 1 Topology optimization with wall thickness and piecewise developability constraints for foldable shape-changing structures. *Structural and Multidisciplinary Optimization*, **2022**, 65, 1 3.6