

# G Gary Wang

## List of Publications by Year in descending order

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67  
papers

4,533  
citations

257101

24  
h-index

155451

55  
g-index

67  
all docs

67  
docs citations

67  
times ranked

3019  
citing authors

#	ARTICLE	IF	CITATIONS
1	Review of Metamodeling Techniques in Support of Engineering Design Optimization. Journal of Mechanical Design, Transactions of the ASME, 2007, 129, 370-380.	1.7	1,403
2	Survey of modeling and optimization strategies to solve high-dimensional design problems with computationally-expensive black-box functions. Structural and Multidisciplinary Optimization, 2010, 41, 219-241.	1.7	471
3	Adaptive Response Surface Method Using Inherited Latin Hypercube Design Points. Journal of Mechanical Design, Transactions of the ASME, 2003, 125, 210-220.	1.7	428
4	ADAPTIVE RESPONSE SURFACE METHOD - A GLOBAL OPTIMIZATION SCHEME FOR APPROXIMATION-BASED DESIGN PROBLEMS. Engineering Optimization, 2001, 33, 707-733.	1.5	218
5	Mode-pursuing sampling method for global optimization on expensive black-box functions. Engineering Optimization, 2004, 36, 419-438.	1.5	180
6	Reliable design space and complete single-loop reliability-based design optimization. Reliability Engineering and System Safety, 2008, 93, 1218-1230.	5.1	155
7	Metamodeling for High Dimensional Simulation-Based Design Problems. Journal of Mechanical Design, Transactions of the ASME, 2010, 132, .	1.7	127
8	Fuzzy clustering based hierarchical metamodeling for design space reduction and optimization. Engineering Optimization, 2004, 36, 313-335.	1.5	115
9	A Novel Evolutionary Sampling Assisted Optimization Method for High-Dimensional Expensive Problems. IEEE Transactions on Evolutionary Computation, 2019, 23, 815-827.	7.5	108
10	An Efficient Pareto Set Identification Approach for Multiobjective Optimization on Black-Box Functions. Journal of Mechanical Design, Transactions of the ASME, 2005, 127, 866-874.	1.7	103
11	Real-Time Smart Charging of Electric Vehicles for Demand Charge Reduction at Non-Residential Sites. IEEE Transactions on Smart Grid, 2018, 9, 4027-4037.	6.2	90
12	Microstructural and Mechanical Characterization of Catalyst Coated Membranes Subjected to In Situ Hydrothermal Fatigue. Journal of the Electrochemical Society, 2015, 162, F1461-F1469.	1.3	79
13	Creep properties of catalyst coated membranes for polymer electrolyte fuel cells. Journal of Power Sources, 2015, 285, 16-28.	4.0	68
14	Mechanical properties of catalyst coated membranes for fuel cells. Journal of Power Sources, 2013, 234, 38-47.	4.0	58
15	On the constitutive relations for catalyst coated membrane applied to in-situ fuel cell modeling. Journal of Power Sources, 2014, 252, 176-188.	4.0	57
16	An intuitive distance-based explanation of opposition-based sampling. Applied Soft Computing Journal, 2012, 12, 2828-2839.	4.1	55
17	Efficient adaptive response surface method using intelligent space exploration strategy. Structural and Multidisciplinary Optimization, 2015, 51, 1335-1362.	1.7	48
18	Mode Pursuing Sampling Method for Discrete Variable Optimization on Expensive Black-Box Functions. Journal of Mechanical Design, Transactions of the ASME, 2008, 130, .	1.7	45

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19	Effect of catalyst layer defects on local membrane degradation in polymer electrolyte fuel cells. Journal of Power Sources, 2016, 322, 17-25.	4.0	44
20	Trust Region Based Mode Pursuing Sampling Method for Global Optimization of High Dimensional Design Problems. Journal of Mechanical Design, Transactions of the ASME, 2015, 137, .	1.7	41
21	Non-linear dimensional variation analysis for sheet metal assemblies by contact modeling. Finite Elements in Analysis and Design, 2007, 44, 34-44.	1.7	40
22	Empirical membrane lifetime model for heavy duty fuel cell systems. Journal of Power Sources, 2016, 336, 240-250.	4.0	40
23	Employing fractals and FEM for detailed variation analysis of non-rigid assemblies. International Journal of Machine Tools and Manufacture, 2005, 45, 445-454.	6.2	37
24	Metamodel-Based Optimization for Problems With Expensive Objective and Constraint Functions. Journal of Mechanical Design, Transactions of the ASME, 2011, 133, .	1.7	36
25	High Dimensional Model Representation With Principal Component Analysis. Journal of Mechanical Design, Transactions of the ASME, 2014, 136, .	1.7	27
26	Multi-Fidelity Modeling and Adaptive Co-Kriging-Based Optimization for All-Electric Geostationary Orbit Satellite Systems. Journal of Mechanical Design, Transactions of the ASME, 2020, 142, .	1.7	25
27	Collaboration Pursuing Method for Multidisciplinary Design Optimization Problems. AIAA Journal, 2007, 45, 1091-1103.	1.5	24
28	Simultaneous optimization of fixture and joint positions for non-rigid sheet metal assembly. International Journal of Advanced Manufacturing Technology, 2008, 36, 386-394.	1.5	24
29	Wavelets-based method for variation analysis of non-rigid assemblies. International Journal of Machine Tools and Manufacture, 2005, 45, 1551-1559.	6.2	22
30	On the Performance of the PSP Method for Mixed-Variable Multi-Objective Design Optimization. Journal of Mechanical Design, Transactions of the ASME, 2010, 132, .	1.7	22
31	Ex situ characterization and modelling of fatigue crack propagation in catalyst coated membrane composites for fuel cell applications. International Journal of Hydrogen Energy, 2019, 44, 12057-12072.	3.8	22
32	Turning Black-Box Functions Into White Functions. Journal of Mechanical Design, Transactions of the ASME, 2011, 133, .	1.7	21
33	Modification of DIRECT for high-dimensional design problems. Engineering Optimization, 2014, 46, 810-823.	1.5	21
34	Failure Surface Frontier for Reliability Assessment on Expensive Performance Function. Journal of Mechanical Design, Transactions of the ASME, 2006, 128, 1227-1235.	1.7	19
35	Integrating Least Square Support Vector Regression and Mode Pursuing Sampling Optimization for Crashworthiness Design. Journal of Mechanical Design, Transactions of the ASME, 2011, 133, .	1.7	17
36	Decomposition for large-scale global optimization based on quantified variable correlations uncovered by metamodeling. Engineering Optimization, 2015, 47, 429-452.	1.5	17

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37	Extended Collaboration Pursuing Method for Solver Larger Multidisciplinary Design Optimization Problems. AIAA Journal, 2007, 45, 1208-1221.	1.5	14
38	Optimization on Metamodeling-Supported Iterative Decomposition. Journal of Mechanical Design, Transactions of the ASME, 2016, 138, .	1.7	14
39	Multidisciplinary modeling and surrogate assisted optimization for satellite constellation systems. Structural and Multidisciplinary Optimization, 2018, 58, 2173-2188.	1.7	14
40	Sequential Radial Basis Function-Based Optimization Method Using Virtual Sample Generation. Journal of Mechanical Design, Transactions of the ASME, 2020, 142, .	1.7	14
41	Development of an automatic design and optimization system for industrial silencers. Journal of Manufacturing Systems, 2003, 22, 327-339.	7.6	13
42	Causal artificial neural network and its applications in engineering design. Engineering Applications of Artificial Intelligence, 2021, 97, 104089.	4.3	13
43	Design Space Reduction for Multi-Objective Optimization and Robust Design Optimization Problems. , 0, , .		12
44	Survey of Modeling and Optimization Strategies for High-Dimensional Design Problems. , 2008, , .		12
45	An Adaptive Aggregation-Based Approach for Expensively Constrained Black-Box Optimization Problems. Journal of Mechanical Design, Transactions of the ASME, 2018, 140, .	1.7	12
46	Employing Knowledge on Causal Relationship to Assist Multidisciplinary Design Optimization. Journal of Mechanical Design, Transactions of the ASME, 2019, 141, .	1.7	12
47	Knowledge-Assisted Optimization for Large-Scale Design Problems: A Review and Proposition. Journal of Mechanical Design, Transactions of the ASME, 2020, 142, .	1.7	12
48	Reliability Assessment Using Discriminative Sampling and Metamodeling. , 0, , .		11
49	Employing partial metamodels for optimization with scarce samples. Structural and Multidisciplinary Optimization, 2018, 57, 1329-1343.	1.7	10
50	Designing scalable product families by the radial basis functionâ€“high-dimensional model representation metamodeling technique. Engineering Optimization, 2015, 47, 1423-1439.	1.5	9
51	Development of Adaptive RBF-HDMR Model for Approximating High Dimensional Problems. , 2009, , .		8
52	DESIGN OPTIMIZATION OF A COMPLEX MECHANICAL SYSTEM USING ADAPTIVE RESPONSE SURFACE METHOD. Transactions of the Canadian Society for Mechanical Engineering, 2000, 24, 295-306.	0.3	7
53	Constraint Importance Mode Pursuing Sampling for Continuous Global Optimization. , 2010, , .		6
54	Dimension Reduction and Decomposition Using Causal Graph and Qualitative Analysis for Aircraft Concept Design Optimization. , 2017, , .		6

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55	Mining constraint relationships and redundancies with association analysis for optimization problem formulation. <i>Engineering Optimization</i> , 2016, 48, 115-134.	1.5	5
56	Mode-Pursuing Sampling Method Using Discriminative Coordinate Perturbation for High-Dimensional Expensive Black-Box Optimization. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2021, 143, .	1.7	5
57	A New Design for Production (DFP) Methodology with Two Case Studies. <i>Concurrent Engineering Research and Applications</i> , 2004, 12, 263-273.	2.0	3
58	Metamodelling-based Product Family Design of Plug-in Hybrid Electric Vehicles. <i>International Journal of Sustainable Engineering</i> , 2017, 10, 58-70.	1.9	3
59	Multi-Objective Optimization for High-Dimensional Expensively Constrained Black-Box Problems. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2021, 143, .	1.7	3
60	Adaptive Orthonormal Basis Functions for High Dimensional Metamodeling With Existing Sample Points. , 2012, , .		2
61	Customized dimensional analysis conceptual modelling framework for design optimization—a case study on the cross-flow micro turbine model. <i>Engineering Optimization</i> , 2019, 51, 1168-1184.	1.5	2
62	Optimization of Fixture and Joint Positions in Sheet Metal Assembly: The Effect of Fixture Numbers and Constraints. , 2011, , .		1
63	Mixed Discrete and Continuous Variable Optimization Based on Constraint Aggregation and Relative Sensitivity. , 2013, , .		1
64	Knowledge Assisted Optimization for Large-Scale Problems: A Review and Proposition. , 2018, , .		1
65	Reliability-Based Design Optimization on Qualitative Objective With Limited Information. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2018, 140, .	1.7	1
66	Boundary search and simplex decomposition method for MDO problems with a convex or star-like state parameter region. <i>Structural and Multidisciplinary Optimization</i> , 2008, 35, 285-300.	1.7	0
67	Design optimization of base widths of transmission tower using mode-pursuing sampling global optimization method. , 2010, , .		0