Jasbir S Arora

List of Publications by Year
in descending order

60 papers	3,695 citations	186209 28 h-index	161767 54 g-index
62 all docs	62 docs citations	62 times ranked	2915 citing authors

#	Article	IF	Citations
1	Discrete variable optimization of structures subjected to dynamic loads using equivalent static loads and metaheuristic algorithms. Optimization and Engineering, 2022, 23, 643-687.	1.3	7
2	Optimization-based dynamic 3D human running prediction: effects of foot location and orientation. Robotica, 2015, 33, 413-435.	1.3	5
3	Dynamic Optimization of Human Running With Analytical Gradients. Journal of Computational and Nonlinear Dynamics, 2015, 10, .	0.7	7
4	Backward walking simulation of humans using optimization. Structural and Multidisciplinary Optimization, 2014, 50, 169-179.	1.7	10
5	3D HUMAN LIFTING MOTION PREDICTION WITH DIFFERENT PERFORMANCE MEASURES. International Journal of Humanoid Robotics, 2012, 09, 1250012.	0.6	24
6	Hybrid predictive dynamics: a new approach to simulate human motion. Multibody System Dynamics, 2012, 28, 199-224.	1.7	36
7	Predictive simulation of human walking transitions using an optimization formulation. Structural and Multidisciplinary Optimization, 2012, 45, 759-772.	1.7	23
8	Concurrent motion planning and reaction load distribution for redundant dynamic systems under external holonomic constraints. International Journal for Numerical Methods in Engineering, 2011, 88, 47-65.	1.5	14
9	Optimization-based prediction of asymmetric human gait. Journal of Biomechanics, 2011, 44, 683-693.	0.9	76
10	Predictive dynamics: an optimization-based novel approach for human motion simulation. Structural and Multidisciplinary Optimization, 2010, 41, 465-479.	1.7	101
11	The weighted sum method for multi-objective optimization: new insights. Structural and Multidisciplinary Optimization, 2010, 41, 853-862.	1.7	1,111
12	Physics-based modeling and simulation of human walking: a review of optimization-based and other approaches. Structural and Multidisciplinary Optimization, 2010, 42, 1-23.	1.7	106
13	Human lifting simulation using a multi-objective optimization approach. Multibody System Dynamics, 2010, 23, 431-451.	1.7	94
14	Dynamic motion planning of overarm throw forÂaÂbipedÂhuman multibody system. Multibody System Dynamics, 2010, 24, 1-24.	1.7	36
15	Optimizationâ€based dynamic human walking prediction: One step formulation. International Journal for Numerical Methods in Engineering, 2009, 79, 667-695.	1.5	86
16	Several simultaneous formulations for transient dynamic response optimization: An evaluation. International Journal for Numerical Methods in Engineering, 2009, 80, 631-650.	1.5	14
17	Optimization-based motion prediction of mechanical systems: sensitivity analysis. Structural and Multidisciplinary Optimization, 2009, 37, 595-608.	1.7	50
18	Use of multi-objective optimization for digital human posture prediction. Engineering Optimization, 2009, 41, 925-943.	1.5	44

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19	Throwing motion generation of a biped human model. , 2008, , .		1
20	Dynamic Motion Planning of 3D Human Locomotion Using Gradient-Based Optimization. Journal of Biomechanical Engineering, 2008, 130, 031002.	0.6	37
21	INTRODUCTION TO OPTIMIZATION. , 2007, , 1-34.		0
22	Optimization of large-scale truss structures using sparse SAND formulations. International Journal for Numerical Methods in Engineering, 2007, 69, 390-407.	1.5	24
23	SENSITIVITY-FREE FORMULATIONS FOR STRUCTURAL AND MECHANICAL SYSTEM OPTIMIZATION. , 2007, , 415-444.		0
24	A review of optimization of structures subjected to transient loads. Structural and Multidisciplinary Optimization, 2006, 31, 81-95.	1.7	177
25	Alternative Formulations for Structural Optimization: An Evaluation Using Frames. Journal of Structural Engineering, 2006, 132, 1880-1889.	1.7	16
26	An Optimization-Based Methodology to Predict Digital Human Gait Motion. , 2005, , .		7
27	Function-transformation methods for multi-objective optimization. Engineering Optimization, 2005, 37, 551-570.	1.5	130
28	Optimal Design of Latticed Towers Subjected to Earthquake Loading. Journal of Structural Engineering, 2002, 128, 197-204.	1.7	41
29	Optimization of Elevated Concrete Foundations for Vibrating Machines. Journal of Structural Engineering, 2002, 128, 1470-1479.	1.7	5
30	A New Approach for Conceptual Design of Structural Systems. , 2001, , 48.		0
31	Study of variational inequality and equality formulations for elastostatic frictional contact problems. Archives of Computational Methods in Engineering, 2000, 7, 387-449.	6.0	16
32	Optimal Design of Lattice Towers Under Earthquake Loading. , 2000, , 1.		0
33	Optimal Design of H-Frame Transmission Poles for Earthquake Loading. Journal of Structural Engineering, 1999, 125, 1299-1308.	1.7	36
34	Explicit and Implicit Methods for Design Sensitivity Analysis of Nonlinear Structures Under Dynamic Loads. Applied Mechanics Reviews, 1997, 50, S11-S19.	4.5	9
35	Basic Concepts of Computational Methods for Optimum Design. , 1997, , 291-302.		1
36	OPTIMAL DESIGN WITH DISCRETE VARIABLES: SOME NUMERICAL EXPERIMENTS. International Journal for Numerical Methods in Engineering, 1997, 40, 165-188.	1.5	71

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37	A genetic algorithm for sequencing type problems in engineering design. International Journal for Numerical Methods in Engineering, 1997, 40, 3105-3115.	1.5	51
38	DISCRETE STRUCTURAL OPTIMIZATION WITH COMMERCIALLY AVAILABLE SECTIONS. Doboku Gakkai Ronbunshu, 1996, 1996, 1-18.	0.2	4
39	Optimal control of HVAC systems using DDP and NLP techniques. Optimal Control Applications and Methods, 1996, 17, 71-78.	1.3	16
40	Comparison of methods for design sensitivity analysis for optimal control of thermal systems. Optimal Control Applications and Methods, 1993, 14, 17-37.	1.3	12
41	Constrained conjugate directions methods for design optimization of large systems. AIAA Journal, 1993, 31, 388-395.	1.5	7
42	Variational principle for shape design sensitivity analysis. AIAA Journal, 1992, 30, 538-547.	1.5	77
43	Computational design optimization: A review and future directions. Structural Safety, 1990, 7, 131-148.	2.8	54
44	Interactive Design Optimization of Structural Systems. Lecture Notes in Engineering, 1989, , 10-16.	0.1	8
45	Discussion: â€œAn Investigation of Pshenichnyiâ€™s Recursive Quadratic Programming Method for Engineering Optimizationâ€•(Gabriele, G. A., and Beltracchi, T. J., 1987, ASME J. Mech. Transm. Autom. Des.,) Tj ETQq1 1 0.784314 rgB...	0.1	3
46	Uses of artificial intelligence in design optimization. Computer Methods in Applied Mechanics and Engineering, 1986, 54, 303-323.	3.4	48
47	A sensitivity interpretation of adjoint variables in optimal design. Computer Methods in Applied Mechanics and Engineering, 1985, 48, 81-89.	3.4	17
48	A study of mathematical programming methods for structural optimization. Part I: Theory. International Journal for Numerical Methods in Engineering, 1985, 21, 1583-1599.	1.5	264
49	A study of mathematical programmingmethods for structural optimization. Part II: Numerical results. International Journal for Numerical Methods in Engineering, 1985, 21, 1601-1623.	1.5	76
50	A recursive quadratic programming method with active set strategy for optimal design. International Journal for Numerical Methods in Engineering, 1984, 20, 803-816.	1.5	72
51	A Computational Study of Transformation Methods for Optimal Design. AIAA Journal, 1984, 22, 535-542.	1.5	42
52	An algorithm for engineering design optimization. International Journal for Numerical Methods in Engineering, 1983, 19, 841-858.	1.5	17
53	EFFICIENT TREATMENT OF CONSTRAINTS IN LARGE-SCALE STRUCTURAL OPTIMIZATION. Engineering Optimization, 1981, 5, 105-119.	1.5	4
54	Potential of Transformation Methods in Optimal Design. AIAA Journal, 1981, 19, 1372-1374.	1.5	16

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55	Eigensolution for large structural systems with substructures. International Journal for Numerical Methods in Engineering, 1980, 15, 333-341.	1.5	30
56	Analysis of optimality criteria and gradient projection methods for optimal structural design. Computer Methods in Applied Mechanics and Engineering, 1980, 23, 185-213.	3.4	25
57	Optimal design of large structures for damage tolerance. AIAA Journal, 1980, 18, 563-570.	1.5	28
58	Reply by Authors to G.N. Vanderplaats. AIAA Journal, 1980, 18, 1407-1408.	1.5	3
59	Methods of Design Sensitivity Analysis in Structural Optimization. AIAA Journal, 1979, 17, 970-974.	1.5	269
60	Design sensitivity analysis of elastic mechanical systems. Computer Methods in Applied Mechanics and Engineering, 1978, 15, 35-62.	3.4	119