

Hyunsun A Kim

List of Publications by Year in descending order

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Version: 2024-02-01

56
papers

2,820
citations

218677

26
h-index

223800

46
g-index

61
all docs

61
docs citations

61
times ranked

2673
citing authors

#	ARTICLE	IF	CITATIONS
1	Topology optimization of nonlinear periodically microstructured materials for tailored homogenized constitutive properties. <i>Composite Structures</i> , 2021, 266, 113729.	5.8	15
2	Level-set topology optimization considering nonlinear thermoelasticity. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 361, 112735.	6.6	36
3	Topology optimization of vibrational piezoelectric energy harvesters for structural health monitoring applications. <i>Journal of Intelligent Material Systems and Structures</i> , 2019, 30, 2894-2907.	2.5	20
4	Stress Minimization Using The Level Set Topology Optimization. , 2017, , .		2
5	Level-set topology optimization with many linear buckling constraints using an efficient and robust eigensolver. <i>International Journal for Numerical Methods in Engineering</i> , 2016, 107, 1029-1053.	2.8	54
6	New optimization method for steered fiber composites using the level set method. <i>Structural and Multidisciplinary Optimization</i> , 2015, 52, 493-505.	3.5	75
7	Simultaneous optimisation of structural topology and material grading using level set method. <i>Materials Science and Technology</i> , 2015, 31, 884-894.	1.6	16
8	Experimental analysis of the dynamical response of energy harvesting devices based on bistable laminated plates. <i>Meccanica</i> , 2015, 50, 1961-1970.	2.0	69
9	Investigation of Aligned Conductive Polymer Nanocomposites for Actuation of Bistable Laminates. , 2015, , .		2
10	Manufacture and Characterisation of Piezoelectric Broadband Energy Harvesters Based on Asymmetric Bistable Cantilever Laminates. <i>Ferroelectrics</i> , 2015, 480, 67-76.	0.6	12
11	Coupled aerostructural topology optimization using a level set method for 3D aircraft wings. <i>Structural and Multidisciplinary Optimization</i> , 2015, 51, 1113-1132.	3.5	48
12	Introducing the sequential linear programming level-set method for topology optimization. <i>Structural and Multidisciplinary Optimization</i> , 2015, 51, 631-643.	3.5	94
13	Piezoelectric Fibres Integrated into Structural Composites. <i>Ferroelectrics</i> , 2014, 466, 14-20.	0.6	6
14	Modelling the Dynamic Response of Bistable Composite Plates for Piezoelectric Energy Harvesting. , 2014, , .		14
15	Actuation of Bistable Laminates by Conductive Polymer Nanocomposites for use in Thermal-Mechanical Aerosurface De-icing Systems. , 2014, , .		11
16	Aeroelastic Tailoring of a Plate Wing with Functionally Graded Materials. , 2014, , .		1
17	Virtual visual sensors and their application in structural health monitoring. <i>Structural Health Monitoring</i> , 2014, 13, 251-264.	7.5	51
18	Piezoelectric and ferroelectric materials and structures for energy harvesting applications. <i>Energy and Environmental Science</i> , 2014, 7, 25-44.	30.8	926

#	ARTICLE	IF	CITATIONS
19	Aeroelastic tailoring of a plate wing with functionally graded materials. <i>Journal of Fluids and Structures</i> , 2014, 51, 292-312.	3.4	19
20	2D composites based on [011]-poled relaxor-ferroelectric single crystals: analysis of the piezoelectric anisotropy and squared figures of merit for energy harvesting applications. <i>Microsystem Technologies</i> , 2014, 20, 709-717.	2.0	4
21	Active Composites based on Bistable Laminates. <i>Procedia Engineering</i> , 2014, 75, 140-144.	1.2	14
22	Non-invasive damage detection in beams using marker extraction and wavelets. <i>Mechanical Systems and Signal Processing</i> , 2014, 49, 13-23.	8.0	16
23	A new hole insertion method for level set based structural topology optimization. <i>International Journal for Numerical Methods in Engineering</i> , 2013, 93, 118-134.	2.8	58
24	Robust Topology Optimization: Minimization of Expected and Variance of Compliance. <i>AIAA Journal</i> , 2013, 51, 2656-2664.	2.6	97
25	Sensitivity of bistable laminates to uncertainties in material properties, geometry and environmental conditions. <i>Composite Structures</i> , 2013, 102, 276-286.	5.8	55
26	Structural Assessment of Advanced Tow-Steered Shells. , 2013, , .		18
27	Robust Topology Optimisation with Generalised Probability Distribution of Loading. , 2013, , .		3
28	Applications of 3D Level Set Topology Optimization. , 2012, , .		0
29	A Study of Bistable Laminates of Generic Layup for Adaptive Structures. <i>Strain</i> , 2012, 48, 235-240.	2.4	19
30	Optimization of Stiffness Characteristics for the Design of Bistable Composite Laminates. <i>AIAA Journal</i> , 2012, 50, 2211-2218.	2.6	16
31	Optimal configurations of bistable piezo-composites for energy harvesting. <i>Applied Physics Letters</i> , 2012, 100, .	3.3	110
32	A fast method for binary programming using first-order derivatives, with application to topology optimization with buckling constraints. <i>International Journal for Numerical Methods in Engineering</i> , 2012, 92, 1026-1043.	2.8	19
33	Introducing Loading Uncertainty in Topology Optimization. <i>AIAA Journal</i> , 2011, 49, 760-768.	2.6	123
34	Modeling and characterization of piezoelectrically actuated bistable composites. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2011, 58, 1737-1750.	3.0	62
35	Modelling of piezoelectrically actuated bistable composites. <i>Materials Letters</i> , 2011, 65, 1261-1263.	2.6	55
36	Investigation and improvement of sensitivity computation using the area-fraction weighted fixed grid FEM and structural optimization. <i>Finite Elements in Analysis and Design</i> , 2011, 47, 933-941.	3.2	55

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37	Modeling and optimization of bistable composite laminates for piezoelectric actuation. Journal of Intelligent Material Systems and Structures, 2011, 22, 2181-2191.	2.5	29
38	Bistable composite laminates: Effects of laminate composition on cured shape and response to thermal load. Composite Structures, 2010, 92, 2220-2225.	5.8	101
39	Characterisation and modelling of the cured shapes of arbitrary layup bistable composite laminates. Composite Structures, 2010, 92, 1694-1700.	5.8	101
40	Shape Memory Alloy-Piezoelectric Active Structures for Reversible Actuation of Bistable Composites. AIAA Journal, 2010, 48, 1265-1268.	2.6	53
41	Optimization of composite stiffened panels subject to compression and lateral pressure using a bi-level approach. Structural and Multidisciplinary Optimization, 2008, 36, 235-245.	3.5	17
42	Introducing a discrete modelling technique for buckling of panels under combined loading. Structural and Multidisciplinary Optimization, 2008, 36, 3-13.	3.5	2
43	Special issue on optimization of aerospace structures. Structural and Multidisciplinary Optimization, 2008, 36, 1-2.	3.5	10
44	Investigation of cancellous bone architecture using structural optimisation. Journal of Biomechanics, 2008, 41, 629-635.	2.1	9
45	Characterisation of actuation properties of piezoelectric bi-stable carbon-fibre laminates. Composites Part A: Applied Science and Manufacturing, 2008, 39, 697-703.	7.6	50
46	Bimodal Buckling of Optimised Truss-Lattice Shear Panels. AIAA Journal, 2008, 46, 1937-1943.	2.6	0
47	Characterisation of Force-Deflection Behaviour of Piezoelectrically Actuated Bistable Composite Laminate under Two-Axis Constraint. Advances in Science and Technology, 2008, 56, 380-385.	0.2	1
48	Postbuckling of truss-lattice shear panels using exact theory. Journal of Mechanics of Materials and Structures, 2008, 3, 995-1009.	0.6	0
49	Morphing and Shape Control using Unsymmetrical Composites. Journal of Intelligent Material Systems and Structures, 2007, 18, 89-98.	2.5	83
50	An evaluative study on ESO and SIMP for optimising a cantilever beam. Structural and Multidisciplinary Optimization, 2007, 34, 403-414.	3.5	40
51	Investigation of External Airbags for Rotorcraft Crashworthiness. Journal of Aircraft, 2006, 43, 809-816.	2.4	3
52	Improving efficiency of evolutionary structural optimization by implementing fixed grid mesh. Structural and Multidisciplinary Optimization, 2002, 24, 441-448.	3.5	32
53	On the development of structural optimisation and its relevance in engineering design. Design Studies, 2002, 23, 85-102.	3.1	24
54	Determination of an optimal topology with a predefined number of cavities. AIAA Journal, 2002, 40, 739-744.	2.6	1

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55	A method for varying the number of cavities in an optimized topology using Evolutionary Structural Optimization. Structural and Multidisciplinary Optimization, 2000, 19, 140-147.	3.5	27
56	Introduction of fixed grid in evolutionary structural optimisation. Engineering Computations, 2000, 17, 427-439.	1.4	42