

Tanmoy Mukhopadhyay

List of Publications by Year in descending order

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95
papers

3,574
citations

76294

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docs citations

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times ranked

1197
citing authors

#	ARTICLE	IF	CITATIONS
1	Metamodel based high-fidelity stochastic analysis of composite laminates: A concise review with critical comparative assessment. <i>Composite Structures</i> , 2017, 171, 227-250.	3.1	118
2	A Critical Assessment of Kriging Model Variants for High-Fidelity Uncertainty Quantification in Dynamics of composite Shells. <i>Archives of Computational Methods in Engineering</i> , 2017, 24, 495-518.	6.0	94
3	Effective in-plane elastic properties of auxetic honeycombs with spatial irregularity. <i>Mechanics of Materials</i> , 2016, 95, 204-222.	1.7	93
4	Stochastic natural frequency analysis of damaged thin-walled laminated composite beams with uncertainty in micromechanical properties. <i>Composite Structures</i> , 2017, 160, 312-334.	3.1	93
5	Uncertain natural frequency analysis of composite plates including effect of noise – A polynomial neural network approach. <i>Composite Structures</i> , 2016, 143, 130-142.	3.1	89
6	Effective in-plane elastic moduli of quasi-random spatially irregular hexagonal lattices. <i>International Journal of Engineering Science</i> , 2017, 119, 142-179.	2.7	87
7	Free-Vibration Analysis of Sandwich Panels with Randomly Irregular Honeycomb Core. <i>Journal of Engineering Mechanics - ASCE</i> , 2016, 142, .	1.6	81
8	Stochastic free vibration analyses of composite shallow doubly curved shells – A Kriging model approach. <i>Composites Part B: Engineering</i> , 2015, 70, 99-112.	5.9	79
9	System reliability analysis of soil slopes with general slip surfaces using multivariate adaptive regression splines. <i>Computers and Geotechnics</i> , 2017, 87, 212-228.	2.3	79
10	Stochastic mechanics of metamaterials. <i>Composite Structures</i> , 2017, 162, 85-97.	3.1	76
11	Equivalent in-plane elastic properties of irregular honeycombs: An analytical approach. <i>International Journal of Solids and Structures</i> , 2016, 91, 169-184.	1.3	72
12	Stochastic free vibration analysis of angle-ply composite plates – A RS-HDMR approach. <i>Composite Structures</i> , 2015, 122, 526-536.	3.1	70
13	Stochastic dynamic analysis of twisted functionally graded plates. <i>Composites Part B: Engineering</i> , 2018, 147, 259-278.	5.9	70
14	Fuzzy uncertainty propagation in composites using Gram–Schmidt polynomial chaos expansion. <i>Applied Mathematical Modelling</i> , 2016, 40, 4412-4428.	2.2	67
15	On quantifying the effect of noise in surrogate based stochastic free vibration analysis of laminated composite shallow shells. <i>Composite Structures</i> , 2016, 140, 798-805.	3.1	65
16	Stochastic buckling analysis of sandwich plates: The importance of higher order modes. <i>International Journal of Mechanical Sciences</i> , 2019, 152, 630-643.	3.6	63
17	Structural Damage Identification Using Response Surface-Based Multi-objective Optimization: A Comparative Study. <i>Arabian Journal for Science and Engineering</i> , 2015, 40, 1027-1044.	1.1	59
18	Probabilistic micromechanical spatial variability quantification in laminated composites. <i>Composites Part B: Engineering</i> , 2018, 151, 291-325.	5.9	59

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19	Advances in Computational Intelligence of Polymer Composite Materials: Machine Learning Assisted Modeling, Analysis and Design. Archives of Computational Methods in Engineering, 2022, 29, 3341-3385.	6.0	59
20	Effect of cutout on stochastic natural frequency of composite curved panels. Composites Part B: Engineering, 2016, 105, 188-202.	5.9	55
21	Spatial vulnerability analysis for the first ply failure strength of composite laminates including effect of delamination. Composite Structures, 2018, 184, 554-567.	3.1	55
22	Probabilistic characterisation for dynamics and stability of laminated soft core sandwich plates. Journal of Sandwich Structures and Materials, 2019, 21, 366-397.	2.0	55
23	Effective mechanical properties of multilayer nano-heterostructures. Scientific Reports, 2017, 7, 15818.	1.6	53
24	Stochastic low-velocity impact on functionally graded plates: Probabilistic and non-probabilistic uncertainty quantification. Composites Part B: Engineering, 2019, 159, 461-480.	5.9	53
25	Bottom up surrogate based approach for stochastic frequency response analysis of laminated composite plates. Composite Structures, 2016, 140, 712-727.	3.1	51
26	Frequency domain homogenization for the viscoelastic properties of spatially correlated quasi-periodic lattices. International Journal of Mechanical Sciences, 2019, 150, 784-806.	3.6	51
27	Probing the shear modulus of two-dimensional multiplanar nanostructures and heterostructures. Nanoscale, 2018, 10, 5280-5294.	2.8	50
28	Stochastic dynamic behaviour of hydrodynamic journal bearings including the effect of surface roughness. International Journal of Mechanical Sciences, 2018, 142-143, 370-383.	3.6	50
29	Programmable stiffness and shape modulation in origami materials: Emergence of a distant actuation feature. Applied Materials Today, 2020, 19, 100537.	2.3	48
30	Rotational and ply-level uncertainty in response of composite shallow conical shells. Composite Structures, 2015, 131, 594-605.	3.1	47
31	Stochastic dynamic stability analysis of composite curved panels subjected to non-uniform partial edge loading. European Journal of Mechanics, A/Solids, 2018, 67, 108-122.	2.1	47
32	Effect of delamination on the stochastic natural frequencies of composite laminates. Composites Part B: Engineering, 2018, 154, 242-256.	5.9	47
33	A Response Surface Modelling Approach for Resonance Driven Reliability Based Optimization of Composite Shells. Periodica Polytechnica: Civil Engineering, 2016, 60, 103-111.	0.6	47
34	Uncertainty Quantification in Natural Frequency of Composite Plates - An Artificial Neural Network Based Approach. Advanced Composites Letters, 2016, 25, 096369351602500.	1.3	46
35	Spatially varying fuzzy multi-scale uncertainty propagation in unidirectional fibre reinforced composites. Composite Structures, 2019, 209, 940-967.	3.1	46
36	Thermal uncertainty quantification in frequency responses of laminated composite plates. Composites Part B: Engineering, 2015, 80, 186-197.	5.9	45

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37	A multivariate adaptive regression splines based damage identification methodology for web core composite bridges including the effect of noise. <i>Journal of Sandwich Structures and Materials</i> , 2018, 20, 885-903.	2.0	45
38	Stochastic natural frequency of composite conical shells. <i>Acta Mechanica</i> , 2015, 226, 2537-2553.	1.1	43
39	Probabilistic Analysis and Design of HCP Nanowires: An Efficient Surrogate Based Molecular Dynamics Simulation Approach. <i>Journal of Materials Science and Technology</i> , 2016, 32, 1345-1351.	5.6	43
40	Optimum design of FRP bridge deck: an efficient RS-HDMR based approach. <i>Structural and Multidisciplinary Optimization</i> , 2015, 52, 459-477.	1.7	42
41	Structural damage identification: A random sampling-high dimensional model representation approach. <i>Advances in Structural Engineering</i> , 2016, 19, 908-927.	1.2	42
42	A polynomial chaos expansion based molecular dynamics study for probabilistic strength analysis of nano-twinned copper. <i>Materials Research Express</i> , 2016, 3, 036501.	0.8	41
43	A semi-analytical stochastic buckling quantification of porous functionally graded plates. <i>Aerospace Science and Technology</i> , 2020, 105, 105928.	2.5	40
44	Broadband dynamic elastic moduli of honeycomb lattice materials: A generalized analytical approach. <i>Mechanics of Materials</i> , 2021, 157, 103796.	1.7	40
45	Machine learning based stochastic dynamic analysis of functionally graded shells. <i>Composite Structures</i> , 2020, 237, 111870.	3.1	37
46	Probing the frequency-dependent elastic moduli of lattice materials. <i>Acta Materialia</i> , 2019, 165, 654-665.	3.8	36
47	Voltage-dependent modulation of elastic moduli in lattice metamaterials: Emergence of a programmable state-transition capability. <i>International Journal of Solids and Structures</i> , 2021, 208-209, 31-48.	1.3	36
48	Theoretical limits for negative elastic moduli in subacoustic lattice materials. <i>Physical Review B</i> , 2019, 99, .	1.1	35
49	A hybrid stochastic sensitivity analysis for low-frequency vibration and low-velocity impact of functionally graded plates. <i>Composites Part B: Engineering</i> , 2019, 176, 107221.	5.9	34
50	Genetic programming-assisted multi-scale optimization for multi-objective dynamic performance of laminated composites: the advantage of more elementary-level analyses. <i>Neural Computing and Applications</i> , 2020, 32, 7969-7993.	3.2	33
51	Anisotropy tailoring in geometrically isotropic multi-material lattices. <i>Extreme Mechanics Letters</i> , 2020, 40, 100934.	2.0	33
52	Modified embedded-atom method interatomic potentials for Al-Cu, Al-Fe and Al-Ni binary alloys: From room temperature to melting point. <i>Computational Materials Science</i> , 2022, 201, 110902.	1.4	33
53	Vibration and Buckling Analyses of Sandwich Plates Containing Functionally Graded Metal Foam Core. <i>Acta Mechanica Solida Sinica</i> , 2022, 35, 1-16.	1.0	32
54	Effective elastic properties of two dimensional multiplanar hexagonal nanostructures. <i>2D Materials</i> , 2017, 4, 025006.	2.0	31

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55	Sparse machine learning assisted deep computational insights on the mechanical properties of graphene with intrinsic defects and doping. <i>Journal of Physics and Chemistry of Solids</i> , 2021, 155, 110111.	1.9	31
56	Optimisation of Fibre-Reinforced Polymer Web Core Bridge Deck—A Hybrid Approach. <i>Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE)</i> , 2015, 25, 173-183.	0.5	30
57	Stochastic low-velocity impact analysis of sandwich plates including the effects of obliqueness and twist. <i>Thin-Walled Structures</i> , 2019, 145, 106411.	2.7	30
58	Efficient lightweight design of FRP bridge deck. <i>Proceedings of the Institution of Civil Engineers: Structures and Buildings</i> , 2015, 168, 697-707.	0.4	29
59	Modulation of multi-directional auxeticity in hybrid origami metamaterials. <i>Applied Materials Today</i> , 2020, 20, 100715.	2.3	29
60	Size-dependent dynamic characteristics of graphene based multi-layer nano hetero-structures. <i>Nanotechnology</i> , 2020, 31, 145705.	1.3	28
61	Probing the chirality-dependent elastic properties and crack propagation behavior of single and bilayer stanene. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 22768-22782.	1.3	27
62	Apparent negative values of Young's moduli of lattice materials under dynamic conditions. <i>International Journal of Engineering Science</i> , 2020, 150, 103231.	2.7	27
63	Stochastic Oblique Impact on Composite Laminates: A Concise Review and Characterization of the Essence of Hybrid Machine Learning Algorithms. <i>Archives of Computational Methods in Engineering</i> , 2021, 28, 1731-1760.	6.0	26
64	Probing the compound effect of spatially varying intrinsic defects and doping on mechanical properties of hybrid graphene monolayers. <i>Journal of Materials Science and Technology</i> , 2020, 50, 44-58.	5.6	23
65	Compound influence of topological defects and heteroatomic inclusions on the mechanical properties of SWCNTs. <i>Materials Today Communications</i> , 2021, 26, 102021.	0.9	19
66	Flexoelectricity and surface effects on coupled electromechanical responses of graphene reinforced functionally graded nanocomposites: A unified size-dependent semi-analytical framework. <i>Mechanical Systems and Signal Processing</i> , 2022, 169, 108757.	4.4	19
67	Active multi-physical modulation of Poisson's ratios in composite piezoelectric lattices: On-demand sign reversal. <i>Composite Structures</i> , 2022, 280, 114857.	3.1	18
68	Probing the Effective Young's Modulus of "Magic Angle" Inspired Multi-Functional Twisted Nano-Heterostructures. <i>Advanced Theory and Simulations</i> , 2020, 3, 2000129.	1.3	17
69	Stochastic Investigation of Natural Frequency for Functionally Graded Plates. <i>IOP Conference Series: Materials Science and Engineering</i> , 2018, 326, 012003.	0.3	13
70	Probing the multi-physical probabilistic dynamics of a novel functional class of hybrid composite shells. <i>Composite Structures</i> , 2021, 262, 113294.	3.1	13
71	Anti-curvature honeycomb lattices for mode-dependent enhancement of nonlinear elastic properties under large deformation. <i>International Journal of Non-Linear Mechanics</i> , 2022, 140, 103887.	1.4	12
72	Probability-based unified sensitivity analysis for multi-objective performances of composite laminates: A surrogate-assisted approach. <i>Composite Structures</i> , 2022, 294, 115559.	3.1	12

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73	Effect of Platen Restraint on Stress-Strain Behavior of Concrete Under Uniaxial Compression: a Comparative Study. <i>Strength of Materials</i> , 2016, 48, 592-602.	0.2	11
74	Hybrid machine-learning-assisted quantification of the compound internal and external uncertainties of graphene: towards inclusive analysis and design. <i>Materials Advances</i> , 2022, 3, 1160-1181.	2.6	11
75	Mixed-Mode Multidirectional Poisson's Ratio Modulation in Auxetic 3D Lattice Metamaterials. <i>Advanced Engineering Materials</i> , 2022, 24, .	1.6	11
76	Dynamic and wave propagation analysis of periodic smart beams coupled with resonant shunt circuits: passive property modulation. <i>European Physical Journal: Special Topics</i> , 2022, 231, 1415-1431.	1.2	11
77	Large-deformation mechanics of anti-curvature lattice materials for mode-dependent enhancement of non-linear shear modulus. <i>Mechanics of Materials</i> , 2022, 171, 104337.	1.7	11
78	Effective elastic properties of lattice materials with intrinsic stresses. <i>Thin-Walled Structures</i> , 2022, 173, 108950.	2.7	9
79	Dual functionality of vibration attenuation and energy harvesting: effect of gradation on non-linear multi-resonator metastructures. <i>European Physical Journal: Special Topics</i> , 2022, 231, 1403-1413.	1.2	9
80	Probing the Stochastic Dynamics of Coronaviruses: Machine Learning Assisted Deep Computational Insights with Exploitable Dimensions. <i>Advanced Theory and Simulations</i> , 2021, 4, 2000291.	1.3	8
81	A multi-attribute decision making approach of mix design based on experimental soil characterization. <i>Frontiers of Structural and Civil Engineering</i> , 2018, 12, 361-371.	1.2	7
82	Semi-analytical atomic-level uncertainty quantification for the elastic properties of 2D materials. <i>Materials Today Nano</i> , 2021, 15, 100126.	2.3	7
83	Condition Assessment and Strengthening of Aged Structures: Perspectives Based on a Critical Case Study. <i>Practice Periodical on Structural Design and Construction</i> , 2019, 24, .	0.7	6
84	Efficient computational system reliability analysis of reinforced soil-retaining structures under seismic conditions including the effect of simulated noise. <i>Engineering With Computers</i> , 0, , 1.	3.5	6
85	Unfolding the mechanical properties of buckypaper composites: nano- to macro-scale coupled atomistic-continuum simulations. <i>Engineering With Computers</i> , 2022, 38, 5199-5229.	3.5	6
86	Probing the stochastic fracture behavior of twisted bilayer graphene: Efficient ANN based molecular dynamics simulations for complete probabilistic characterization. <i>Materials Today Communications</i> , 2022, 32, 103932.	0.9	6
87	Efficient System Reliability Analysis of Earth Slopes Based on Support Vector Machine Regression Model. , 2017, , 127-143.		5
88	A Stochastic Investigation of Effect of Temperature on Natural Frequencies of Functionally Graded Plates. <i>Lecture Notes in Civil Engineering</i> , 2020, , 41-53.	0.3	5
89	ANN-Based Random First-Ply Failure Analyses of Laminated Composite Plates. <i>Lecture Notes in Civil Engineering</i> , 2021, , 131-142.	0.3	3
90	Efficient lightweight design of FRP bridge deck. <i>Proceedings of the Institution of Civil Engineers: Structures and Buildings</i> , 2015, 168, 697-707.	0.4	2

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91	Damage modeling of MWCNT reinforced Carbon/Epoxy composite using different failure criteria: a comparative study. Applied Physics A: Materials Science and Processing, 2022, 128, .	1.1	2
92	Polynomial neural network based probabilistic hydrodynamic analysis of two-lobe bearings with stochasticity in surface roughness. Tribology International, 2022, 174, 107733.	3.0	2
93	8. Fuzzy-based frequency response function analysis of functionally graded plates. , 2018, , 119-139.		1
94	Lattice and continuum based modeling of 2D materials. , 2020, , 165-177.		0
95	Voltage modulation of elastic properties of asymmetric hybrid lattice structure. , 2022, , .		0