George Deodatis

List of Publications by Year
in descending order

70 papers	4,625 citations	172457 29 h-index	102487 66 g-index
71 all docs	71 docs citations	71 times ranked	2153 citing authors

#	Article	IF	Citations
1	Uncertainty Quantification in Objective Resilience. , 2022, , 1-15.		0
2	A methodological framework for determining an optimal coastal protection strategy against storm surges and sea level rise. Natural Hazards, 2021, 107, 1821-1843.	3.4	10
3	High-Speed GIS-Based Simulation of Storm Surgeâ€"Induced Flooding Accounting for Sea Level Rise. Natural Hazards Review, 2021, 22, .	1.5	6
4	Optimization of Coastal Protections in the Presence of Climate Change. Frontiers in Climate, 2021, 3, .	2.8	4
5	Simulation of wind velocity time histories on long span structures modeled as non-Gaussian stochastic waves. Probabilistic Engineering Mechanics, 2020, 59, 103016.	2.7	11
6	Structural Applications of a Predictive Stochastic Ground Motion Model: Assessment and Use. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering, 2018, 4, .	1.7	2
7	Predictive model for site specific simulation of ground motions based on earthquake scenarios. Earthquake Engineering and Structural Dynamics, 2018, 47, 195-218.	4.4	30
8	Distributed Column Damage Effect on Progressive Collapse Vulnerability in Steel Buildings Exposed to an External Blast Event. Journal of Performance of Constructed Facilities, 2017, 31, .	2.0	22
9	Effect of Uncertainty of Tensile Strength of Mortar Joints on the Behavior of Masonry Walls under Lateral Loads. Journal of Structural Engineering, 2017, 143, 04016166.	3.4	5
10	Global Instability Induced Failure of Tall Steel Moment Frame Buildings. Journal of Performance of Constructed Facilities, 2017, 31, 04016082.	2.0	7
11	Stochastic analysis of polymer composites rupture at large deformations modeled by a phase field method. Computer Methods in Applied Mechanics and Engineering, 2016, 312, 596-634.	6.6	46
12	Variability response functions for apparent material properties. Probabilistic Engineering Mechanics, 2016, 44, 28-34.	2.7	2
13	A multi-modal analytical non-stationary spectral model for characterization and stochastic simulation of earthquake ground motions. Soil Dynamics and Earthquake Engineering, 2016, 80, 177-191.	3.8	43
14	Discussion of Feng et al. (2014). â€œStatistical reconstruction of two-phase random mediaâ€•[Comput. Struct. 137 (2014) 78â€"92]. Computers and Structures, 2016, 163, 83-85.	4.4	4
15	Physics-Based Stochastic Model to Determine the Failure Load of Suspension Bridge Main Cables. Journal of Computing in Civil Engineering, 2015, 29, .	4.7	6
16	Extreme storm surge hazard estimation in lower Manhattan. Natural Hazards, 2015, 78, 355-391.	3.4	16
17	Simulation of wind velocities on long span structures: A novel stochastic wave based model. Journal of Wind Engineering and Industrial Aerodynamics, 2015, 147, 154-163.	3.9	57
18	Determining evolutionary spectra from non-stationary autocorrelation functions. Probabilistic Engineering Mechanics, 2015, 41, 73-88.	2.7	17

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19	Loss-of-stability induced progressive collapse modes in 3D steel moment frames. Structure and Infrastructure Engineering, 2015, 11, 334-344.	3.7	32
20	Identification of critical samples of stochastic processes towards feasible structural reliability applications. Structural Safety, 2014, 47, 39-47.	5.3	7
21	Homogenization of random heterogeneous media with inclusions of arbitrary shape modeled by XFEM. Computational Mechanics, 2014, 54, 1221-1235.	4.0	58
22	Earthquake vulnerability of school buildings: Probabilistic structural fragility analyses. Soil Dynamics and Earthquake Engineering, 2014, 67, 169-178.	3.8	41
23	Generalized variability response functions for two-dimensional elasticity problems. Computer Methods in Applied Mechanics and Engineering, 2014, 272, 121-137.	6.6	12
24	Homogenization of Random Heterogeneous Media with Inclusions of Arbitrary Shape. , 2014, , 85-99.		2
25	Generalized Variability Response Functions for Beam Structures with Stochastic Parameters. Journal of Engineering Mechanics - ASCE, 2012, 138, 1165-1185.	2.9	9
26	Stochastic variability of effective properties via the generalized variability response function. Computers and Structures, 2012, 110-111, 107-115.	4.4	5
27	Variability response functions for beams with nonlinear constitutive laws. Probabilistic Engineering Mechanics, 2012, 29, 139-148.	2.7	11
28	A random field based technique for the efficiency enhancement of bridge network life-cycle analysis under uncertainty. Engineering Structures, 2011, 33, 3208-3217.	5.3	19
29	Uncertainty quantification in homogenization of heterogeneous microstructures modeled by XFEM. International Journal for Numerical Methods in Engineering, 2011, 88, 257-278.	2.8	92
30	Variability response functions for effective material properties. Probabilistic Engineering Mechanics, 2011, 26, 174-181.	2.7	24
31	A method for generating fully non-stationary and spectrum-compatible ground motion vector processes. Soil Dynamics and Earthquake Engineering, 2011, 31, 351-360.	3.8	118
32	Critical review and latest developments of a class of simulation algorithms for strongly non-Gaussian random fields. Probabilistic Engineering Mechanics, 2008, 23, 393-407.	2.7	94
33	Multiscale Stochastic Modeling of the Failure of Fiber Reinforced Composites. , 2008, , .		1
34	Random Field-Based Approach for Strength Evaluation of Suspension Bridge Cables. Journal of Structural Engineering, 2007, 133, 1690-1699.	3.4	11
35	Response variability of stochastic frame structures using evolutionary field theory. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 1050-1074.	6.6	21
36	Analysis of mean and mean square response of general linear stochastic finite element systems. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 5454-5471.	6.6	29

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37	Dynamics of nonlinear porous media with applications to soil liquefaction. Soil Dynamics and Earthquake Engineering, 2006, 26, 648-665.	3.8	81
38	Simulation of Multidimensional Binary Random Fields with Application to Modeling of Two-Phase Random Media. Journal of Engineering Mechanics - ASCE, 2006, 132, 619-631.	2.9	23
39	Effects of random heterogeneity of soil properties on bearing capacity. Probabilistic Engineering Mechanics, 2005, 20, 324-341.	2.7	207
40	Flexibility-based upper bounds on the response variability of simple beams. Computer Methods in Applied Mechanics and Engineering, 2005, 194, 1385-1404.	6.6	30
41	Simulation of Binary Random Fields with Applications to Two-Phase Random Media. Journal of Engineering Mechanics - ASCE, 2005, 131, 397-412.	2.9	25
42	Probabilistic Benefit-Cost Analysis for Earthquake Damage Mitigation: Evaluating Measures for Apartment Houses in Turkey. Earthquake Spectra, 2004, 20, 171-203.	3.1	107
43	Risk assessment of an interacting structure-soil system due to liquefaction. Earthquake Engineering and Structural Dynamics, 2002, 31, 851-879.	4.4	69
44	Simulation of Highly Skewed Non-Gaussian Stochastic Processes. Journal of Engineering Mechanics - ASCE, 2001, 127, 1284-1295.	2.9	197
45	Modeling, synthetics and engineering applications of strong earthquake wave motion. Soil Dynamics and Earthquake Engineering, 1999, 18, 209-228.	3.8	24
46	Variability response functions for stochastic plate bending problems. Structural Safety, 1998, 20, 167-188.	5.3	42
47	Simulation of Ergodic Multivariate Stochastic Processes. Journal of Engineering Mechanics - ASCE, 1996, 122, 778-787.	2.9	452
48	Simulation of Multi-Dimensional Gaussian Stochastic Fields by Spectral Representation. Applied Mechanics Reviews, 1996, 49, 29-53.	10.1	375
49	Reliability of aircraft structures under non-periodic inspection: a Bayesian approach. Engineering Fracture Mechanics, 1996, 53, 789-805.	4.3	28
50	Non-stationary stochastic vector processes: seismic ground motion applications. Probabilistic Engineering Mechanics, 1996, 11, 149-167.	2.7	351
51	Simulation of Stochastic Processes and Fields for Monte Carlo Simulation Applications: Some Recent Developments. , 1995, , .		3
52	Safety Analysis of Suspensionâ€Bridge Cables: Williamsburg Bridge. Journal of Structural Engineering, 1994, 120, 3197-3211.	3.4	40
53	Variability Response Functions of Stochastic Plane Stress/Strain Problems. Journal of Engineering Mechanics - ASCE, 1994, 120, 1963-1982.	2.9	40
54	Seismic ground motion in a layered half-space due to a Haskell-type source. I: Theory. Soil Dynamics and Earthquake Engineering, 1994, 13, 281-292.	3.8	12

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55	Seismic ground motion in a layered half-space due to a Haskell-type source. II: Applications. Soil Dynamics and Earthquake Engineering, 1994, 13, 293-301.	3.8	3
56	Non-periodic inspection by Bayesian method II: Structures with elements subjected to different stress levels. Probabilistic Engineering Mechanics, 1992, 7, 205-215.	2.7	14
57	Non-periodic inspection by Bayesian method I. Probabilistic Engineering Mechanics, 1992, 7, 191-204.	2.7	23
58	Weighted Integral Method. I: Stochastic Stiffness Matrix. Journal of Engineering Mechanics - ASCE, 1991, 117, 1851-1864.	2.9	130
59	Simulation of Stochastic Processes by Spectral Representation. Applied Mechanics Reviews, 1991, 44, 191-204.	10.1	991
60	Weighted Integral Method. II: Response Variability and Reliability. Journal of Engineering Mechanics - ASCE, 1991, 117, 1865-1877.	2.9	109
61	Stochastic wave models for stationary and homogeneous seismic ground motion. Structural Safety, 1991, 10, 235-246.	5.3	18
62	Stochastic Wave Representation of Seismic Ground Motion. II: Simulation. Journal of Engineering Mechanics - ASCE, 1990, 116, 2381-2399.	2.9	19
63	Stochastic Wave Representation of Seismic Ground Motion. I: Fâ€K Spectra. Journal of Engineering Mechanics - ASCE, 1990, 116, 2363-2379.	2.9	18
64	Bounds on Response Variability of Stochastic Finite Element Systems. Journal of Engineering Mechanics - ASCE, 1990, 116, 565-585.	2.9	38
65	Simulation of Seismic Ground Motion Using Stochastic Waves. Journal of Engineering Mechanics - ASCE, 1989, 115, 2723-2737.	2.9	76
66	Spatial Strength Variation of Laminated Orthotropic Composites. Journal of Composite Materials, 1989, 23, 1256-1272.	2.4	1
67	Stochastic FEM sensitivity analysis of nonlinear dynamic problems. Probabilistic Engineering Mechanics, 1989, 4, 135-141.	2.7	18
68	Bounds on Response Variability of Stochastic Systems. Journal of Engineering Mechanics - ASCE, 1989, 115, 2543-2563.	2.9	52
69	Autoâ€Regressive Model for Nonstationary Stochastic Processes. Journal of Engineering Mechanics - ASCE, 1988, 114, 1995-2012.	2.9	132
70	Stochastic field model for the residual radius along the length of naturally and artificially corroded rebars. Structure and Infrastructure Engineering, 0, , 1-12.	3.7	2