

# George Deodatis

## List of Publications by Year in descending order

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70  
papers

4,625  
citations

172207

29  
h-index

102304

66  
g-index

71  
all docs

71  
docs citations

71  
times ranked

2153  
citing authors

#	ARTICLE	IF	CITATIONS
1	Simulation of Stochastic Processes by Spectral Representation. Applied Mechanics Reviews, 1991, 44, 191-204.	4.5	991
2	Simulation of Ergodic Multivariate Stochastic Processes. Journal of Engineering Mechanics - ASCE, 1996, 122, 778-787.	1.6	452
3	Simulation of Multi-Dimensional Gaussian Stochastic Fields by Spectral Representation. Applied Mechanics Reviews, 1996, 49, 29-53.	4.5	375
4	Non-stationary stochastic vector processes: seismic ground motion applications. Probabilistic Engineering Mechanics, 1996, 11, 149-167.	1.3	351
5	Effects of random heterogeneity of soil properties on bearing capacity. Probabilistic Engineering Mechanics, 2005, 20, 324-341.	1.3	207
6	Simulation of Highly Skewed Non-Gaussian Stochastic Processes. Journal of Engineering Mechanics - ASCE, 2001, 127, 1284-1295.	1.6	197
7	Auto-Regressive Model for Nonstationary Stochastic Processes. Journal of Engineering Mechanics - ASCE, 1988, 114, 1995-2012.	1.6	132
8	Weighted Integral Method. I: Stochastic Stiffness Matrix. Journal of Engineering Mechanics - ASCE, 1991, 117, 1851-1864.	1.6	130
9	A method for generating fully non-stationary and spectrum-compatible ground motion vector processes. Soil Dynamics and Earthquake Engineering, 2011, 31, 351-360.	1.9	118
10	Weighted Integral Method. II: Response Variability and Reliability. Journal of Engineering Mechanics - ASCE, 1991, 117, 1865-1877.	1.6	109
11	Probabilistic Benefit-Cost Analysis for Earthquake Damage Mitigation: Evaluating Measures for Apartment Houses in Turkey. Earthquake Spectra, 2004, 20, 171-203.	1.6	107
12	Critical review and latest developments of a class of simulation algorithms for strongly non-Gaussian random fields. Probabilistic Engineering Mechanics, 2008, 23, 393-407.	1.3	94
13	Uncertainty quantification in homogenization of heterogeneous microstructures modeled by XFEM. International Journal for Numerical Methods in Engineering, 2011, 88, 257-278.	1.5	92
14	Dynamics of nonlinear porous media with applications to soil liquefaction. Soil Dynamics and Earthquake Engineering, 2006, 26, 648-665.	1.9	81
15	Simulation of Seismic Ground Motion Using Stochastic Waves. Journal of Engineering Mechanics - ASCE, 1989, 115, 2723-2737.	1.6	76
16	Risk assessment of an interacting structure-soil system due to liquefaction. Earthquake Engineering and Structural Dynamics, 2002, 31, 851-879.	2.5	69
17	Homogenization of random heterogeneous media with inclusions of arbitrary shape modeled by XFEM. Computational Mechanics, 2014, 54, 1221-1235.	2.2	58
18	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.	1.7	57

#	ARTICLE	IF	CITATIONS
19	Bounds on Response Variability of Stochastic Systems. Journal of Engineering Mechanics - ASCE, 1989, 115, 2543-2563.	1.6	52
20	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.	3.4	46
21	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.	1.9	43
22	Variability response functions for stochastic plate bending problems. Structural Safety, 1998, 20, 167-188.	2.8	42
23	Earthquake vulnerability of school buildings: Probabilistic structural fragility analyses. Soil Dynamics and Earthquake Engineering, 2014, 67, 169-178.	1.9	41
24	Safety Analysis of Suspension Bridge Cables: Williamsburg Bridge. Journal of Structural Engineering, 1994, 120, 3197-3211.	1.7	40
25	Variability Response Functions of Stochastic Plane Stress/Strain Problems. Journal of Engineering Mechanics - ASCE, 1994, 120, 1963-1982.	1.6	40
26	Bounds on Response Variability of Stochastic Finite Element Systems. Journal of Engineering Mechanics - ASCE, 1990, 116, 565-585.	1.6	38
27	Loss-of-stability induced progressive collapse modes in 3D steel moment frames. Structure and Infrastructure Engineering, 2015, 11, 334-344.	2.0	32
28	Flexibility-based upper bounds on the response variability of simple beams. Computer Methods in Applied Mechanics and Engineering, 2005, 194, 1385-1404.	3.4	30
29	Predictive model for site specific simulation of ground motions based on earthquake scenarios. Earthquake Engineering and Structural Dynamics, 2018, 47, 195-218.	2.5	30
30	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.	3.4	29
31	Reliability of aircraft structures under non-periodic inspection: a Bayesian approach. Engineering Fracture Mechanics, 1996, 53, 789-805.	2.0	28
32	Simulation of Binary Random Fields with Applications to Two-Phase Random Media. Journal of Engineering Mechanics - ASCE, 2005, 131, 397-412.	1.6	25
33	Modeling, synthetics and engineering applications of strong earthquake wave motion. Soil Dynamics and Earthquake Engineering, 1999, 18, 209-228.	1.9	24
34	Variability response functions for effective material properties. Probabilistic Engineering Mechanics, 2011, 26, 174-181.	1.3	24
35	Non-periodic inspection by Bayesian method I. Probabilistic Engineering Mechanics, 1992, 7, 191-204.	1.3	23
36	Simulation of Multidimensional Binary Random Fields with Application to Modeling of Two-Phase Random Media. Journal of Engineering Mechanics - ASCE, 2006, 132, 619-631.	1.6	23

#	ARTICLE	IF	CITATIONS
37	Distributed Column Damage Effect on Progressive Collapse Vulnerability in Steel Buildings Exposed to an External Blast Event. <i>Journal of Performance of Constructed Facilities</i> , 2017, 31, .	1.0	22
38	Response variability of stochastic frame structures using evolutionary field theory. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006, 195, 1050-1074.	3.4	21
39	Stochastic Wave Representation of Seismic Ground Motion. II: Simulation. <i>Journal of Engineering Mechanics - ASCE</i> , 1990, 116, 2381-2399.	1.6	19
40	A random field based technique for the efficiency enhancement of bridge network life-cycle analysis under uncertainty. <i>Engineering Structures</i> , 2011, 33, 3208-3217.	2.6	19
41	Stochastic FEM sensitivity analysis of nonlinear dynamic problems. <i>Probabilistic Engineering Mechanics</i> , 1989, 4, 135-141.	1.3	18
42	Stochastic Wave Representation of Seismic Ground Motion. I: F&E Spectra. <i>Journal of Engineering Mechanics - ASCE</i> , 1990, 116, 2363-2379.	1.6	18
43	Stochastic wave models for stationary and homogeneous seismic ground motion. <i>Structural Safety</i> , 1991, 10, 235-246.	2.8	18
44	Determining evolutionary spectra from non-stationary autocorrelation functions. <i>Probabilistic Engineering Mechanics</i> , 2015, 41, 73-88.	1.3	17
45	Extreme storm surge hazard estimation in lower Manhattan. <i>Natural Hazards</i> , 2015, 78, 355-391.	1.6	16
46	Non-periodic inspection by Bayesian method II: Structures with elements subjected to different stress levels. <i>Probabilistic Engineering Mechanics</i> , 1992, 7, 205-215.	1.3	14
47	Seismic ground motion in a layered half-space due to a Haskell-type source. I: Theory. <i>Soil Dynamics and Earthquake Engineering</i> , 1994, 13, 281-292.	1.9	12
48	Generalized variability response functions for two-dimensional elasticity problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014, 272, 121-137.	3.4	12
49	Random Field-Based Approach for Strength Evaluation of Suspension Bridge Cables. <i>Journal of Structural Engineering</i> , 2007, 133, 1690-1699.	1.7	11
50	Variability response functions for beams with nonlinear constitutive laws. <i>Probabilistic Engineering Mechanics</i> , 2012, 29, 139-148.	1.3	11
51	Simulation of wind velocity time histories on long span structures modeled as non-Gaussian stochastic waves. <i>Probabilistic Engineering Mechanics</i> , 2020, 59, 103016.	1.3	11
52	A methodological framework for determining an optimal coastal protection strategy against storm surges and sea level rise. <i>Natural Hazards</i> , 2021, 107, 1821-1843.	1.6	10
53	Generalized Variability Response Functions for Beam Structures with Stochastic Parameters. <i>Journal of Engineering Mechanics - ASCE</i> , 2012, 138, 1165-1185.	1.6	9
54	Identification of critical samples of stochastic processes towards feasible structural reliability applications. <i>Structural Safety</i> , 2014, 47, 39-47.	2.8	7

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55	Global Instability Induced Failure of Tall Steel Moment Frame Buildings. Journal of Performance of Constructed Facilities, 2017, 31, 04016082.	1.0	7
56	Physics-Based Stochastic Model to Determine the Failure Load of Suspension Bridge Main Cables. Journal of Computing in Civil Engineering, 2015, 29, .	2.5	6
57	High-Speed GIS-Based Simulation of Storm Surgeâ€“Induced Flooding Accounting for Sea Level Rise. Natural Hazards Review, 2021, 22, .	0.8	6
58	Stochastic variability of effective properties via the generalized variability response function. Computers and Structures, 2012, 110-111, 107-115.	2.4	5
59	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.	1.7	5
60	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.	2.4	4
61	Optimization of Coastal Protections in the Presence of Climate Change. Frontiers in Climate, 2021, 3, .	1.3	4
62	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.	1.9	3
63	Simulation of Stochastic Processes and Fields for Monte Carlo Simulation Applications: Some Recent Developments. , 1995, , .		3
64	Variability response functions for apparent material properties. Probabilistic Engineering Mechanics, 2016, 44, 28-34.	1.3	2
65	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, .	1.1	2
66	Homogenization of Random Heterogeneous Media with Inclusions of Arbitrary Shape. , 2014, , 85-99.		2
67	Stochastic field model for the residual radius along the length of naturally and artificially corroded rebars. Structure and Infrastructure Engineering, 0, , 1-12.	2.0	2
68	Spatial Strength Variation of Laminated Orthotropic Composites. Journal of Composite Materials, 1989, 23, 1256-1272.	1.2	1
69	Multiscale Stochastic Modeling of the Failure of Fiber Reinforced Composites. , 2008, , .		1
70	Uncertainty Quantification in Objective Resilience. , 2022, , 1-15.		0