Christian Bucher

List of Publications by Year
in descending order

39 papers	1,062 citations	516710 16 h-index	434195 31 g-index
40 all docs	40 docs citations	40 times ranked	855 citing authors

#	Article	IF	Citations
1	Seismic Fragility Curves of an Arch Dam With Special Regard to Ultimate Limit State. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, 2019, 5, .	1.1	2
2	Metamodels of optimal quality for stochastic structural optimization. Probabilistic Engineering Mechanics, 2018, 54, 131-137.	2.7	13
3	An optimized strategy for using asymptotic sampling for reliability analysis. Structural Safety, 2018, 71, 33-40.	5.3	11
4	A new model order reduction strategy adapted to nonlinear problems in earthquake engineering. Earthquake Engineering and Structural Dynamics, 2017, 46, 537-559.	4.4	41
5	Ideal and physical barrier problems for non-linear systems driven by normal and Poissonian white noise via path integral method. International Journal of Non-Linear Mechanics, 2016, 81, 274-282.	2.6	22
6	First-passage problem for nonlinear systems under LÃ©vy white noise through path integral method. Nonlinear Dynamics, 2016, 85, 1445-1456.	5.2	33
7	Asymptotic sampling â€“ a tool for efficient reliability computation in high dimensions. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 549-550.	0.2	4
8	Analysis and Design of Sliding Isolation Pendulum Systems. IABSE Symposium Report, 2015, , .	0.0	1
9	Efficient solution of the first passage problem by Path Integration for normal and Poissonian white noise. Probabilistic Engineering Mechanics, 2015, 41, 121-128.	2.7	22
10	Dynamic Finite Element analysis of fractionally damped structural systems in the time domain. Acta Mechanica, 2015, 226, 3977-3990.	2.1	16
11	Structural Optimization Under Random Dynamic Seismic Excitation. , 2015, , 3617-3626.		1
12	Structural Reassessment for Lifetime Extension. , 2015, , 141-152.		0
13	Local finite element model updating with forced vibration measurements. Structure and Infrastructure Engineering, 2014, 10, 1573-1594.	3.7	2
14	Identification of critical samples of stochastic processes towards feasible structural reliability applications. Structural Safety, 2014, 47, 39-47.	5.3	7
15	Selective sensitive finite element model updating: an improved approach. Structural Control and Health Monitoring, 2014, 21, 1170-1192.	4.0	8
16	Structural Optimization Under Random Dynamic Seismic Excitation. , 2014, , 1-12.		0
17	Asynchronous collision integrators: Explicit treatment of unilateral contact with friction and nodal restraints. International Journal for Numerical Methods in Engineering, 2013, 95, 562-586.	2.8	10
18	Distance fields on unstructured grids: Stable interpolation, assumed gradients, collision detection and gap function. Computer Methods in Applied Mechanics and Engineering, 2013, 259, 77-92.	6.6	7

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19	Asynchronous variational integration using continuous assumed gradient elements. Computer Methods in Applied Mechanics and Engineering, 2013, 255, 158-166.	6.6	4
20	Optimal reference sensor positions using output-only vibration test data. Mechanical Systems and Signal Processing, 2013, 41, 196-225.	8.0	23
21	Some Aspects when Applying Continuous Assumed Gradient Methods to Explicit Dynamics. Journal of Engineering Mechanics - ASCE, 2012, 138, 910-913.	2.9	1
22	An automatic mode pairing strategy using an enhanced modal assurance criterion based on modal strain energies. Journal of Sound and Vibration, 2010, 329, 5375-5392.	3.9	63
23	Robustness analysis in structural optimization. Structure and Infrastructure Engineering, 2009, 5, 287-293.	3.7	11
24	Analyses of Thermal Conduction and Stress Induced by Electric Current in an Infinite Thin Plate with an Elliptical Hole. Journal of Thermal Stresses, 2009, 32, 1065-1086.	2.0	17
25	Asymptotic sampling for high-dimensional reliability analysis. Probabilistic Engineering Mechanics, 2009, 24, 504-510.	2.7	116
26	Probability-based optimal design of friction-based seismic isolation devices. Structural Safety, 2009, 31, 500-507.	5.3	57
27	Time-variant reliability analysis utilizing results from non-destructive testing. , 2009, , .		1
28	A comparison of approximate response functions in structural reliability analysis. Probabilistic Engineering Mechanics, 2008, 23, 154-163.	2.7	139
29	New concepts for moving least squares: An interpolating non-singular weighting function and weighted nodal least squares. Engineering Analysis With Boundary Elements, 2008, 32, 461-470.	3.7	36
30	Probabilistic analysis of concrete cracking using neural networks and random fields. Probabilistic Engineering Mechanics, 2007, 22, 219-229.	2.7	28
31	Stochastic simulation of cracking in concrete structures using multiparameter random fields. International Journal of Reliability and Safety, 2006, 1, 168.	0.2	11
32	Optimization of lifetime maintenance strategies for deteriorating structures considering probabilities of violating safety, condition, and cost thresholds. Probabilistic Engineering Mechanics, 2006, 21, 1-8.	2.7	69
33	Applications Of Random Field Models In Stochastic Structural Mechanics. , 2006, , 471-484.		2
34	On model updating of existing structures utilizing measured dynamic responses. Structure and Infrastructure Engineering, 2005, 1, 135-143.	3.7	7
35	A Moving Least Squares weighting function for the Element-free Galerkin Method which almost fulfills essential boundary conditions. Structural Engineering and Mechanics, 2005, 21, 315-332.	1.0	65
36	Response Surfaces for Reliability Assessment. , 2004, , .		0

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37	Finite elements for stochastic media problems. Computer Methods in Applied Mechanics and Engineering, 1999, 168, 3-17.	6.6	71
38	A contribution to the SFE-based reliability assessment of nonlinear structures under dynamic loading. Probabilistic Engineering Mechanics, 1995, 10, 265-273.	2.7	46
39	Computational Analysis of Randomness in Structural Mechanics. , 0, , .		95