Miroslav VoÅechovskÃ½

List of Publications by Year
in descending order

65 papers	1,166 citations	430874 18 h-index	395702 33 g-index
70 all docs	70 docs citations	70 times ranked	646 citing authors

#	Article	IF	Citations
1	Correlation control in small-sample Monte Carlo type simulations I: A simulated annealing approach. Probabilistic Engineering Mechanics, 2009, 24, 452-462.	2.7	173
2	Simulation of simply cross correlated random fields by series expansion methods. Structural Safety, 2008, 30, 337-363.	5.3	108
3	Stochastic discrete meso-scale simulations of concrete fracture: Comparison to experimental data. Engineering Fracture Mechanics, 2015, 135, 1-16.	4.3	87
4	FReET: Software for the statistical and reliability analysis of engineering problems and FReET-D: Degradation module. Advances in Engineering Software, 2014, 72, 179-192.	3.8	77
5	Asymptotic Prediction of Energetic-Statistical Size Effect from Deterministic Finite-Element Solutions. Journal of Engineering Mechanics - ASCE, 2007, 133, 153-162.	2.9	72
6	Stochastic modeling of multi-filament yarns: II. Random properties over the length and size effect. International Journal of Solids and Structures, 2006, 43, 435-458.	2.7	58
7	Stochastic modeling of multi-filament yarns. I. Random properties within the cross-section and size effect. International Journal of Solids and Structures, 2006, 43, 413-434.	2.7	58
8	Interplay of size effects in concrete specimens under tension studied via computational stochastic fracture mechanics. International Journal of Solids and Structures, 2007, 44, 2715-2731.	2.7	55
9	Energeticâ€“statistical size effect simulated by SFEM with stratified sampling and crack band model. International Journal for Numerical Methods in Engineering, 2007, 71, 1297-1320.	2.8	53
10	Hierarchical Refinement of Latin Hypercube Samples. Computer-Aided Civil and Infrastructure Engineering, 2015, 30, 394-411.	9.8	39
11	Computational modeling of size effects in concrete specimens under uniaxial tension. International Journal of Fracture, 2008, 154, 27-49.	2.2	36
12	Improved sequentially linear solution procedure. Engineering Fracture Mechanics, 2010, 77, 2263-2276.	4.3	31
13	Correlation control in small sample Monte Carlo type simulations II: Analysis of estimation formulas, random correlation and perfect uncorrelatedness. Probabilistic Engineering Mechanics, 2012, 29, 105-120.	2.7	28
14	Modification of the Audzeâ€“EglÄ¡s criterion to achieve aÂuniform distribution of sampling points. Advances in Engineering Software, 2016, 100, 82-96.	3.8	25
15	Fracture in random quasibrittle media: I. Discrete mesoscale simulations of load capacity and fracture process zone. Engineering Fracture Mechanics, 2020, 235, 107160.	4.3	23
16	Variance-based adaptive sequential sampling for Polynomial Chaos Expansion. Computer Methods in Applied Mechanics and Engineering, 2021, 386, 114105.	6.6	22
17	Incorporation of statistical length scale into Weibull strength theory for composites. Composite Structures, 2010, 92, 2027-2034.	5.8	21
18	Brittle matrix composites with heterogeneous reinforcement: Multi-scale model of a crack bridge with rigid matrix. Composites Science and Technology, 2013, 89, 98-109.	7.8	20

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19	Using Python for scientific computing: Efficient and flexible evaluation of the statistical characteristics of functions with multivariate random inputs. Computer Physics Communications, 2013, 184, 414-427.	7.5	16
20	Probabilistic multiple cracking model of brittle-matrix composite based on a one-by-one crack tracing algorithm. Applied Mathematical Modelling, 2021, 92, 315-332.	4.2	16
21	Modification of the Maximin and Ï•_p (Phi) Criteria to Achieve Statistically Uniform Distribution of Sampling Points. Technometrics, 2020, 62, 371-386.	1.9	14
22	Coupled slidingâ€“decohesionâ€“compression model for a consistent description of monotonic and fatigue behavior of material interfaces. Computer Methods in Applied Mechanics and Engineering, 2022, 398, 115259.	6.6	12
23	Periodic version of the minimax distance criterion for Monte Carlo integration. Advances in Engineering Software, 2020, 149, 102900.	3.8	11
24	Parallel implementation of hyper-dimensional dynamical particle system on CUDA. Advances in Engineering Software, 2018, 125, 178-187.	3.8	9
25	Probabilistic crack bridge model reflecting random bond properties and elastic matrix deformation. Composites Part B: Engineering, 2018, 139, 130-145.	12.0	9
26	Distance-based optimal sampling in aÂhypercube: Analogies to N-body systems. Advances in Engineering Software, 2019, 137, 102709.	3.8	9
27	Distance-based optimal sampling in aÂhypercube: Energy potentials for high-dimensional and low-saturation designs. Advances in Engineering Software, 2020, 149, 102880.	3.8	9
28	Approximation of VoronoÃ¯ cell attributes using parallel solution. Advances in Engineering Software, 2019, 132, 7-17.	3.8	8
29	Optimal singular correlation matrices estimated when the sample size is less than or equal to the number of random variables. Probabilistic Engineering Mechanics, 2012, 30, 104-116.	2.7	7
30	Tensile behavior of carbon textile concrete composite captured using aÂprobabilistic multiscale multiple cracking model. Composite Structures, 2021, 277, 114624.	5.8	7
31	Fracture in random quasibrittle media: II. Analytical model based on extremes of the averaging process. Engineering Fracture Mechanics, 2020, 235, 107155.	4.3	6
32	EVALUATION OF PAIRWISE DISTANCES AMONG POINTS FORMING A REGULAR ORTHOGONAL GRID IN A HYPERCUBE. Journal of Civil Engineering and Management, 2018, 24, 410-423.	3.5	6
33	Bone mineral density modeling via random field: Normality, stationarity, sex and age dependence. Computer Methods and Programs in Biomedicine, 2021, 210, 106353.	4.7	5
34	Safety analysis and reliability assessment of engineering structures â€“ The success story of SARA. Ce/Papers, 2019, 3, 38-47.	0.3	3
35	Identification of the effective bundle length in a multifilament yarn from the size effect response. Journal of Composite Materials, 2011, 45, 2659-2667.	2.4	2
36	Analytical and Numerical Approaches to Modelling of Reinforcement Corrosion in Concrete. Transactions of the VÅ B: Technical University of Ostrava, Civil Engineering Series, 2014, 14, 20-30.	0.3	2

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37	Evaluation of pairwise distances among orthogonal grid points in hypercube. AIP Conference Proceedings, 2017, , .	0.4	2
38	Relations between structure size, mesh density, and elemental strength of lattice models. , 2010, , 419-428.		2
39	Correlation in probabilistic simulation. , 2011, , 2931-2939.		2
40	The Effect of Mesh Density in Lattice Models for Concrete with Incorporated Mesostructure. Key Engineering Materials, 0, 488-489, 29-32.	0.4	1
41	Performance comparison of methods for design of experiments for analysis of tasks involving random variables. AIP Conference Proceedings, 2015, , .	0.4	1
42	Parallelized implementation of dynamical particle system. AIP Conference Proceedings, 2017, , .	0.4	1
43	Adaptive probabilistic modeling of localization, failure and size effect of quasi-brittle materials. , 2006, , 286-286.		1
44	Fracture Simulations of Concrete Using Discrete Meso-level Model with Random Fluctuations of Material Parameters. , 2014, , 3-18.		1
45	Efficient random fields simulation for stochastic FEM analyses. , 2003, , 2383-2386.		1
46	Extension of Sample Size in Latin Hypercube Sampling with Correlated Variables. , 2010, , .		1
47	FORMULATION OF POTENTIAL FOR DYNAMICAL PARTICLE SYSTEM APPLIED TO MONTE CARLO SAMPLING. , 2017, , .		1
48	Discussion of â€œMechanism behind the Size Effect Phenomenonâ€•by Xiaozhi Hu and Kai Duan. Journal of Engineering Mechanics - ASCE, 2011, 137, 304-304.	2.9	0
49	Relation between Structural Size and the Discretization Density of Brittle Homogeneous Lattice Models. Key Engineering Materials, 0, 525-526, 485-488.	0.4	0
50	Stochastic Fracture Simulations of Concrete Beams with Shallow Notches. Key Engineering Materials, 0, 592-593, 229-232.	0.4	0
51	Correlation process resulting from random swapping of the order of elements. , 2013, , .		0
52	Toughness of Brittle-matrix Composites with Heterogeneous Reinforcement. , 2014, 3, 2168-2173.		0
53	On Gaussian approximation of the strength of Daniels' bundle with brittle Weibull fibers. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 557-558.	0.2	0
54	Failure Probability Estimation Using Asymptotic Sampling and Its Dependence upon the Selected Sampling Scheme. Transactions of the VÅB: Technical University of Ostrava, Civil Engineering Series, 2017, 17, 65-72.	0.3	0

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55	Construction of space-filling designs using a dynamical system of repulsive particles. AIP Conference Proceedings, 2019, , .	0.4	0
56	ANALYTICAL MODEL FOR FRACTURE IN RANDOM QUASIBRITTLE MEDIA BASED ON EXTREMES OF THE AVERAGING PROCESS. , 2021, , .		0
57	ADAPTIVE SEQUENTIAL SAMPLING FOR POLYNOMIAL CHAOS EXPANSION. , 2021, , .		0
58	Multiple Cracks Bridged by Multifilament Yarns: Impact of Local Scatter on Ultimate Load. , 2006, , 361-372.		0
59	Statistical Length Scale in Weibull Strength Theory and Its Interaction with Other Scaling Lengths in Quasibrittle Failure. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2009, , 209-221.	0.2	0
60	On Correlation Control in Monte Carlo Type Sampling. , 2010, , .		0
61	Design of Experiment Using Simulation of a Discrete Dynamical System. Transactions of the VÅB: Technical University of Ostrava, Civil Engineering Series, 2016, 16, 125-134.	0.3	0
62	Multiscale probabilistic modeling of a crack bridge in glass fiber reinforced concrete. Applied and Computational Mechanics, 2017, 11, .	0.2	0
63	VORONOI WEIGHTING OF SAMPLES IN MONTE CARLO INTEGRATION. , 2017, , .		0
64	On the Influence of the Interaction Laws of a Dynamical Particle System for Sample Optimization. Transactions of the VÅB: Technical University of Ostrava, Civil Engineering Series, 2017, 17, 137-146.	0.3	0
65	TRC-SPECIMENS MODELED AS A CHAIN OF CRACKS BRIDGED BY BUNDLES. , 2006, , 777-783.		0