Miroslav VoÅ€chovskÃ½

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	Coupled sliding–decohesion–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
2	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
3	ANALYTICAL MODEL FOR FRACTURE IN RANDOM QUASIBRITTLE MEDIA BASED ON EXTREMES OF THE AVERAGING PROCESS. , 2021, , .		0
4	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
5	Tensile behavior of carbon textile concrete composite captured using a probabilistic multiscale multiple cracking model. Composite Structures, 2021, 277, 114624.	5.8	7
6	Variance-based adaptive sequential sampling for Polynomial Chaos Expansion. Computer Methods in Applied Mechanics and Engineering, 2021, 386, 114105.	6.6	22
7	ADAPTIVE SEQUENTIAL SAMPLING FOR POLYNOMIAL CHAOS EXPANSION. , 2021, , .		0
8	Modification of the Maximin and ϕ_p (Phi) Criteria to Achieve Statistically Uniform Distribution of Sampling Points. Technometrics, 2020, 62, 371-386.	1.9	14
9	Periodic version of the minimax distance criterion for Monte Carlo integration. Advances in Engineering Software, 2020, 149, 102900.	3.8	11
10	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
11	Distance-based optimal sampling in a hypercube: Energy potentials for high-dimensional and low-saturation designs. Advances in Engineering Software, 2020, 149, 102880.	3.8	9
12	Fracture in random quasibrittle media: II. Analytical model based on extremes of the averaging process. Engineering Fracture Mechanics, 2020, 235, 107155.	4.3	6
13	Distance-based optimal sampling in a hypercube: Analogies to N-body systems. Advances in Engineering Software, 2019, 137, 102709.	3.8	9
14	Construction of space-filling designs using a dynamical system of repulsive particles. AIP Conference Proceedings, 2019, , .	0.4	0
15	Safety analysis and reliability assessment of engineering structures – The success story of SARA. Ce/Papers, 2019, 3, 38-47.	0.3	3
16	Approximation of Voronoï cell attributes using parallel solution. Advances in Engineering Software, 2019, 132, 7-17.	3.8	8
17	Parallel implementation of hyper-dimensional dynamical particle system on CUDA. Advances in Engineering Software, 2018, 125, 178-187.	3.8	9
18	Probabilistic crack bridge model reflecting random bond properties and elastic matrix deformation. Composites Part B: Engineering, 2018, 139, 130-145.	12.0	9

#	Article	IF	Citations
19	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
20	Parallelized implementation of dynamical particle system. AIP Conference Proceedings, 2017, , .	0.4	1
21	Failure Probability Estimation Using Asymptotic Sampling and Its Dependence upon the Selected Sampling Scheme. Transactions of the VŠB: Technical University of Ostrava, Civil Engineering Series, 2017, 17, 65-72.	0.3	0
22	Evaluation of pairwise distances among orthogonal grid points in hypercube. AIP Conference Proceedings, 2017, , .	0.4	2
23	FORMULATION OF POTENTIAL FOR DYNAMICAL PARTICLE SYSTEM APPLIED TO MONTE CARLO SAMPLING. , 2017, , .		1
24	Multiscale probabilistic modeling of a crack bridge in glass fiber reinforced concrete. Applied and Computational Mechanics, 2017, 11, .	0.2	0
25	VORONOI WEIGHTING OF SAMPLES IN MONTE CARLO INTEGRATION. , 2017, , .		0
26	On the Influence of the Interaction Laws of a Dynamical Particle System for Sample Optimization. Transactions of the VŠB: Technical University of Ostrava, Civil Engineering Series, 2017, 17, 137-146.	0.3	0
27	Modification of the Audze–Eglājs criterion to achieve a uniform distribution of sampling points. Advances in Engineering Software, 2016, 100, 82-96.	3.8	25
28	Design of Experiment Using Simulation of a Discrete Dynamical System. Transactions of the VŠB: Technical University of Ostrava, Civil Engineering Series, 2016, 16, 125-134.	0.3	0
29	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
30	Stochastic discrete meso-scale simulations of concrete fracture: Comparison to experimental data. Engineering Fracture Mechanics, 2015, 135, 1-16.	4.3	87
31	Performance comparison of methods for design of experiments for analysis of tasks involving random variables. AIP Conference Proceedings, 2015, , .	0.4	1
32	Hierarchical Refinement of Latin Hypercube Samples. Computer-Aided Civil and Infrastructure Engineering, 2015, 30, 394-411.	9.8	39
33	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
34	Toughness of Brittle-matrix Composites with Heterogeneous Reinforcement. , 2014, 3, 2168-2173.		0
35	Analytical and Numerical Approaches to Modelling of Reinforcement Corrosion in Concrete. Transactions of the VŠB: Technical University of Ostrava, Civil Engineering Series, 2014, 14, 20-30.	0.3	2
36	Fracture Simulations of Concrete Using Discrete Meso-level Model with Random Fluctuations of Material Parameters. , 2014, , 3-18.		1

#	Article	IF	Citations
37	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
38	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
39	Correlation process resulting from random swapping of the order of elements. , 2013, , .		0
40	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
41	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
42	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
43	Discussion of "Mechanism behind the Size Effect Phenomenon" by Xiaozhi Hu and Kai Duan. Journal of Engineering Mechanics - ASCE, 2011, 137, 304-304.	2.9	0
44	Correlation in probabilistic simulation. , 2011, , 2931-2939.		2
45	Incorporation of statistical length scale into Weibull strength theory for composites. Composite Structures, 2010, 92, 2027-2034.	5.8	21
46	Improved sequentially linear solution procedure. Engineering Fracture Mechanics, 2010, 77, 2263-2276.	4.3	31
47	Relations between structure size, mesh density, and elemental strength of lattice models. , 2010, , 419-428.		2
48	Extension of Sample Size in Latin Hypercube Sampling with Correlated Variables. , 2010, , .		1
49	On Correlation Control in Monte Carlo Type Sampling. , 2010, , .		0
50	Correlation control in small-sample Monte Carlo type simulations I: A simulated annealing approach. Probabilistic Engineering Mechanics, 2009, 24, 452-462.	2.7	173
51	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
52	Simulation of simply cross correlated random fields by series expansion methods. Structural Safety, 2008, 30, 337-363.	5.3	108
53	Computational modeling of size effects in concrete specimens under uniaxial tension. International Journal of Fracture, 2008, 154, 27-49.	2.2	36
54	Asymptotic Prediction of Energetic-Statistical Size Effect from Deterministic Finite-Element Solutions. Journal of Engineering Mechanics - ASCE, 2007, 133, 153-162.	2.9	72

#	Article	IF	Citations
55	Energetic–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
56	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
57	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
58	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
59	Adaptive probabilistic modeling of localization, failure and size effect of quasi-brittle materials. , 2006, , 286-286.		1
60	Multiple Cracks Bridged by Multifilament Yarns: Impact of Local Scatter on Ultimate Load. , 2006, , 361-372.		0
61	TRC-SPECIMENS MODELED AS A CHAIN OF CRACKS BRIDGED BY BUNDLES. , 2006, , 777-783.		0
62	Efficient random fields simulation for stochastic FEM analyses. , 2003, , 2383-2386.		1
63	The Effect of Mesh Density in Lattice Models for Concrete with Incorporated Mesostructure. Key Engineering Materials, 0, 488-489, 29-32.	0.4	1
64	Relation between Structural Size and the Discretization Density of Brittle Homogeneous Lattice Models. Key Engineering Materials, 0, 525-526, 485-488.	0.4	0
65	Stochastic Fracture Simulations of Concrete Beams with Shallow Notches. Key Engineering Materials, 0, 592-593, 229-232.	0.4	0