

Xiaodan Ren

List of Publications by Year in descending order

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85
papers

2,139
citations

279798

23
h-index

254184

43
g-index

85
all docs

85
docs citations

85
times ranked

1021
citing authors

#	ARTICLE	IF	CITATIONS
1	An energy release rate-based plastic-damage model for concrete. <i>International Journal of Solids and Structures</i> , 2006, 43, 583-612.	2.7	451
2	Stochastic damage model for concrete based on energy equivalent strain. <i>International Journal of Solids and Structures</i> , 2009, 46, 2407-2419.	2.7	159
3	Stochastic Harmonic Function Representation of Stochastic Processes. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2013, 80, .	2.2	118
4	A rate-dependent stochastic damage-plasticity model for quasi-brittle materials. <i>Computational Mechanics</i> , 2015, 55, 267-285.	4.0	89
5	Softened Damage-Plasticity Model for Analysis of Cracked Reinforced Concrete Structures. <i>Journal of Structural Engineering</i> , 2018, 144, .	3.4	73
6	Stochastic Nonlinear Behavior of Reinforced Concrete Frames. II: Numerical Simulation. <i>Journal of Structural Engineering</i> , 2016, 142, .	3.4	65
7	Collapse simulation of reinforced concrete frame structures. <i>Structural Design of Tall and Special Buildings</i> , 2016, 25, 578-601.	1.9	63
8	Cyclic behavior modeling of reinforced concrete shear walls based on softened damage-plasticity model. <i>Engineering Structures</i> , 2018, 166, 363-375.	5.3	52
9	Assessing the spatial variability of the concrete by the rebound hammer test and compression test of drilled cores. <i>Construction and Building Materials</i> , 2018, 188, 820-832.	7.2	42
10	Micro-cracks informed damage models for brittle solids. <i>International Journal of Solids and Structures</i> , 2011, 48, 1560-1571.	2.7	39
11	Experimental investigation on the bond of reinforcing bars in high performance concrete under cyclic loading. <i>Materials and Structures/Materiaux Et Constructions</i> , 2007, 40, 1027-1044.	3.1	37
12	A unified dynamic model for concrete considering viscoplasticity and rate-dependent damage. <i>International Journal of Damage Mechanics</i> , 2013, 22, 530-555.	4.2	37
13	Analytic solution for the bond stress-slip relationship between rebar and concrete. <i>Construction and Building Materials</i> , 2019, 197, 385-397.	7.2	37
14	Triaxial Behavior of Concrete Subjected to Dynamic Compression. <i>Journal of Structural Engineering</i> , 2013, 139, 1582-1592.	3.4	36
15	Stochastic damage hysteretic model for concrete based on micromechanical approach. <i>International Journal of Non-Linear Mechanics</i> , 2016, 83, 15-25.	2.6	36
16	Multi-scale based fracture and damage analysis of steel fiber reinforced concrete. <i>Engineering Failure Analysis</i> , 2013, 35, 253-261.	4.0	31
17	Stochastic Nonlinear Behavior of Reinforced Concrete Frames. I: Experimental Investigation. <i>Journal of Structural Engineering</i> , 2016, 142, .	3.4	30
18	Copula-Based Quantification of Probabilistic Dependence Configurations of Material Parameters in Damage Constitutive Modeling of Concrete. <i>Journal of Structural Engineering</i> , 2020, 146, .	3.4	29

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19	A competitive mechanism driven damage-plasticity model for fatigue behavior of concrete. <i>International Journal of Damage Mechanics</i> , 2016, 25, 377-399.	4.2	28
20	Incremental dynamic analysis of seismic collapse of super-tall building structures. <i>Structural Design of Tall and Special Buildings</i> , 2017, 26, e1370.	1.9	28
21	A random medium model for simulation of concrete failure. <i>Science China Technological Sciences</i> , 2013, 56, 1273-1281.	4.0	26
22	Stochastic seismic collapse and reliability assessment of high-rise reinforced concrete structures. <i>Structural Design of Tall and Special Buildings</i> , 2018, 27, e1417.	1.9	25
23	Computational investigation on damage of reinforced concrete slab subjected to underwater explosion. <i>Ocean Engineering</i> , 2020, 195, 106671.	4.3	25
24	Nonlinear dynamic analysis of frame-core tube building under seismic sequential ground motions by a supercomputer. <i>Soil Dynamics and Earthquake Engineering</i> , 2019, 124, 86-97.	3.8	23
25	Dynamic fracture in irregularly structured systems. <i>Physical Review E</i> , 2012, 85, 055102.	2.1	22
26	Numerical Investigation on Damage of Concrete Gravity Dam during Noncontact Underwater Explosion. <i>Journal of Performance of Constructed Facilities</i> , 2019, 33, .	2.0	21
27	Stochastic analysis of fatigue of concrete bridges. <i>Structure and Infrastructure Engineering</i> , 2019, 15, 925-939.	3.7	21
28	Indentation tests based multi-scale random media modeling of concrete. <i>Construction and Building Materials</i> , 2018, 168, 209-220.	7.2	20
29	Multi-scale based stochastic damage evolution. <i>Engineering Failure Analysis</i> , 2011, 18, 726-734.	4.0	19
30	A study on the simulation method for fatigue damage behavior of reinforced concrete structures. <i>Engineering Structures</i> , 2017, 150, 25-38.	5.3	19
31	Probabilistic model of the minimum effective cross-section area of non-uniform corroded steel bars. <i>Construction and Building Materials</i> , 2019, 216, 227-238.	7.2	18
32	Bond behavior between steel reinforcing bars and concrete under dynamic loads. <i>Structural Concrete</i> , 2018, 19, 1806-1817.	3.1	17
33	Fatigue reliability analysis of concrete structures based on physical synthesis method. <i>Probabilistic Engineering Mechanics</i> , 2019, 56, 14-26.	2.7	17
34	Compressive behavior of stirrup-confined concrete under dynamic loading. <i>Construction and Building Materials</i> , 2017, 154, 10-22.	7.2	16
35	Coupled Creep-Damage-Plasticity Model for Concrete under Long-Term Loading. <i>Journal of Engineering Mechanics - ASCE</i> , 2020, 146, .	2.9	16
36	Random fields representation over manifolds via isometric feature mapping-based dimension reduction. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2022, 37, 593-611.	9.8	15

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37	A two-scale stochastic damage model for concrete under fatigue loading. <i>International Journal of Fatigue</i> , 2021, 153, 106508.	5.7	15
38	Fragility analysis of a prestressed concrete containment vessel subjected to internal pressure via the probability density evolution method. <i>Nuclear Engineering and Design</i> , 2022, 390, 111709.	1.7	15
39	Dynamic Initiation and Propagation of Multiple Cracks in Brittle Materials. <i>Materials</i> , 2013, 6, 3241-3253.	2.9	14
40	High-fidelity numerical analysis of the damage and failure mechanisms of a prestressed concrete containment vessel under internal pressure. <i>Nuclear Engineering and Design</i> , 2021, 383, 111439.	1.7	14
41	Hysteretic deteriorating model for quasi-brittle materials based on micromechanical damage approach. <i>International Journal of Non-Linear Mechanics</i> , 2011, 46, 321-329.	2.6	13
42	A New Reliability Method Combining Kriging and Probability Density Evolution Method. <i>International Journal of Structural Stability and Dynamics</i> , 2017, 17, 1750113.	2.4	13
43	Building Information Model-based finite element analysis of high-rise building community subjected to extreme earthquakes. <i>Advances in Structural Engineering</i> , 2019, 22, 971-981.	2.4	13
44	A Multifield Model for Early-Age Massive Concrete Structures: Hydration, Damage, and Creep. <i>Journal of Engineering Mechanics - ASCE</i> , 2020, 146, .	2.9	13
45	A shake table test study of reinforced concrete shear wall model structures exhibiting strong non-linear behaviors. <i>Engineering Structures</i> , 2020, 212, 110481.	5.3	13
46	Experimental investigations of failure modes of reinforced concrete beams without web reinforcement. <i>Engineering Structures</i> , 2019, 185, 47-57.	5.3	12
47	Physically based constitutive modeling of concrete fatigue and practical numerical method for cyclic loading simulation. <i>Engineering Failure Analysis</i> , 2019, 101, 230-242.	4.0	12
48	Rate effect on the stress-strain behavior of concrete under uniaxial tensile stress. <i>Structural Concrete</i> , 2021, 22, E815.	3.1	12
49	Uncertainty Quantification of Random Fields Based on Spatially Sparse Data by Synthesizing Bayesian Compressive Sensing and Stochastic Harmonic Function. <i>Mechanical Systems and Signal Processing</i> , 2021, 153, 107377.	8.0	12
50	Efficient stochastic finite element analysis of irregular wall structures with inelastic random field properties over manifold. <i>Computational Mechanics</i> , 2022, 69, 95-111.	4.0	12
51	Multiscale Random Fields-Based Damage Modeling and Analysis of Concrete Structures. <i>Journal of Engineering Mechanics - ASCE</i> , 2019, 145, .	2.9	11
52	Energy-based collapse assessment of concrete structures subjected to random damage evolutions. <i>Probabilistic Engineering Mechanics</i> , 2020, 60, 103019.	2.7	11
53	Seismic behavior of tall buildings using steel-concrete composite columns and shear walls. <i>Structural Design of Tall and Special Buildings</i> , 2018, 27, e1441.	1.9	10
54	A mesh-size-objective modeling of quasi-brittle material using micro-cell informed damage law. <i>International Journal of Damage Mechanics</i> , 2018, 27, 913-936.	4.2	8

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55	Failure mechanisms of pedicle screws and cortical screws fixation under large displacement: A biomechanical and microstructural study based on a clinical case scenario. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2020, 104, 103646.	3.1	8
56	Mechanical properties of underpinning joints in structural moving: Experiments and numerical modeling. <i>Structural Design of Tall and Special Buildings</i> , 2017, 26, e1379.	1.9	7
57	Reliability assessment of reinforced concrete structures based on random damage model. <i>Structure and Infrastructure Engineering</i> , 2018, 14, 780-790.	3.7	7
58	Effects of spatial variability of ground motions on collapse behaviour of buildings. <i>Soil Dynamics and Earthquake Engineering</i> , 2021, 144, 106668.	3.8	7
59	Physical Mechanism of Concrete Damage under Compression. <i>Materials</i> , 2019, 12, 3295.	2.9	6
60	Probabilistic Model for Long-Term Time-Dependent Compressive Strength of Concrete in Existing Buildings. <i>Journal of Performance of Constructed Facilities</i> , 2018, 32, .	2.0	5
61	Implicit gradient-enhanced force-based Timoshenko fiber element formulation for reinforced concrete structures. <i>International Journal for Numerical Methods in Engineering</i> , 2021, 122, 325-347.	2.8	5
62	Analytical examination of mesh-dependency issue for uniaxial RC elements and new fracture energy-based regularization technique. <i>International Journal of Damage Mechanics</i> , 2023, 32, 321-339.	4.2	5
63	Random transition of failure modes in concrete shear walls with constitutive parameters involving spatial variation. <i>Engineering Structures</i> , 2021, 242, 112508.	5.3	5
64	Two-scale random field model for quasi-brittle materials. <i>Probabilistic Engineering Mechanics</i> , 2021, 66, 103154.	2.7	5
65	Numerical modeling of delayed damage and failure of concrete structures under sustained loading. <i>Engineering Structures</i> , 2022, 252, 113568.	5.3	5
66	Slip-enhanced plastic-damage constitutive model for masonry structures. <i>Engineering Structures</i> , 2022, 254, 113792.	5.3	5
67	Effects of bedrocks on the dynamic response of concrete gravity dams subjected to underwater explosions. <i>Engineering Failure Analysis</i> , 2022, 139, 106410.	4.0	5
68	Failure modeling of concrete: A peri-dynamical approach with bond-based correspondence to bi-scalar damage model. <i>Engineering Fracture Mechanics</i> , 2022, 268, 108470.	4.3	5
69	Development and initial validation of a novel smoothed-particle hydrodynamics-based simulation model of trabecular bone penetration by metallic implants. <i>Journal of Orthopaedic Research</i> , 2018, 36, 1114-1123.	2.3	4
70	An improved crack-tip element treatment for advanced FEMs. <i>Theoretical and Applied Fracture Mechanics</i> , 2020, 108, 102587.	4.7	4
71	Experimental study on stochastic responses of reinforced concrete beams under fatigue loading. <i>International Journal of Fatigue</i> , 2021, 151, 106347.	5.7	4
72	A subcritical microcrack informed creep-damage model for quasi-brittle materials. <i>Computers and Geotechnics</i> , 2022, 141, 104501.	4.7	4

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73	A Temporal Multiscale Model for Fatigue Damage of Concrete. Journal of Engineering Mechanics - ASCE, 2022, 148, .	2.9	4
74	Modeling of unstable creep failure of spatial variable rocks subjected to sustained loading. Computers and Geotechnics, 2022, 148, 104847.	4.7	4
75	A novel fracture mechanics model explaining the axial penetration of bone-like porous, compressible solids by various orthopaedic implant tips. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 80, 128-136.	3.1	3
76	Equivalent constant-amplitude fatigue load method based on the energy equivalence principle. Advances in Structural Engineering, 2019, 22, 2892-2906.	2.4	3
77	Centrifuge experiment and numerical analysis of an air-backed plate subjected to underwater shock loading. Frontiers of Structural and Civil Engineering, 2019, 13, 1350-1362.	2.9	2
78	On the combination of nonlinear load effects of structures. Structural Safety, 2021, 90, 102064.	5.3	2
79	Pragmatic analysis of material instability under strain control loading. Engineering Failure Analysis, 2011, 18, 720-725.	4.0	1
80	Heterogeneous Lattice Model Based Simulation of Concrete under Uniaxial Loading. Applied Mechanics and Materials, 0, 784, 249-257.	0.2	1
81	A Micro-Cell Size Dependent Damage Law of Concrete. Applied Mechanics and Materials, 2015, 784, 200-208.	0.2	0
82	Damage Theory Based Fatigue Simulation of Concrete Structure. Applied Mechanics and Materials, 0, 784, 51-58.	0.2	0
83	Temporally stabilized peridynamics methods for shocks in solids. Computational Mechanics, 2022, 69, 489-504.	4.0	0
84	Introduction to the Special Issue Numerical Modeling and Simulation for Structural Safety and Disaster Mitigation. CMES - Computer Modeling in Engineering and Sciences, 2020, 124, 411-413.	1.1	0
85	Probabilistic Analysis on Stochastic Failure Modes of Reinforced Concrete Beams under Fatigue Loading. Journal of Engineering Mechanics - ASCE, 2022, 148, .	2.9	0