

Richard Wan

List of Publications by Year in descending order

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77
papers

1,155
citations

471061

17
h-index

454577

30
g-index

80
all docs

80
docs citations

80
times ranked

666
citing authors

#	ARTICLE	IF	CITATIONS
1	Failure Mechanics of Geomaterials. , 2022, , 1077-1109.		0
2	Fabric response to stress probing in granular materials: Two-dimensional, anisotropic systems. Computers and Geotechnics, 2022, 146, 104695.	2.3	3
3	Derivation of soil water retention curve incorporating electrochemical effects. Acta Geotechnica, 2021, 16, 1147-1160.	2.9	3
4	A three-dimensional multiscale damage-poroelasticity model for fractured porous media. International Journal for Numerical and Analytical Methods in Geomechanics, 2021, 45, 585-630.	1.7	5
5	Anisotropic nature of the capillary stress tensor. EPJ Web of Conferences, 2021, 249, 11010.	0.1	1
6	Non-coaxial plastic flow of granular materials through stress probing analysis. International Journal of Solids and Structures, 2021, 222-223, 111015.	1.3	7
7	Quasistatic kinetic avalanches and self-organized criticality in deviatorically loaded granular media. Physical Review E, 2021, 104, 024901.	0.8	6
8	Micromechanical description of adsorptive-capillary stress in wet fine-grained media. Computers and Geotechnics, 2021, 137, 104047.	2.3	4
9	Tensile and shear failure behaviour of compacted clay " hybrid failure mode. International Journal of Geotechnical Engineering, 2020, 14, 231-241.	1.1	9
10	Micromechanical analysis of cyclic and asymptotic behaviors of a granular backfill. Acta Geotechnica, 2020, 15, 715-734.	2.9	4
11	Hydraulic variations in permafrost due to open-pit mining and climate change: a case study in the Canadian Arctic. Acta Geotechnica, 2020, 15, 883-905.	2.9	7
12	Micromechanical correlation between elasticity and strength characteristics of anisotropic rocks. International Journal of Rock Mechanics and Minings Sciences, 2020, 125, 104154.	2.6	9
13	Thermal Disturbances in Permafrost Due to Open Pit Mining and Tailings Impoundment. Minerals (Basel, Switzerland), 2020, 10, 35.	0.8	2
14	Critical plane analysis for interpreting experimental results on anisotropic rocks. Acta Geotechnica, 2019, 14, 1215-1225.	2.9	10
15	Fabric response to strain probing in granular materials: Two-dimensional, isotropic systems. International Journal of Solids and Structures, 2019, 156-157, 251-262.	1.3	6
16	Preferential growth of force network in granular media. Granular Matter, 2019, 21, 1.	1.1	9
17	Numerical modeling of fracturing in permeable rocks via a micromechanical continuum model. International Journal for Numerical and Analytical Methods in Geomechanics, 2019, 43, 1885-1915.	1.7	8
18	A probabilistic approach for computing water retention of particulate systems from statistics of grain size and tessellated pore network. International Journal for Numerical and Analytical Methods in Geomechanics, 2019, 43, 956-973.	1.7	9

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19	Fabric Evolution in Granular Materials Under Strain Probing. Springer Series in Geomechanics and Geoengineering, 2019, , 151-161.	0.0	1
20	Micromechanical approach to swelling behavior of capillaryâ€porous media with coupled physics. International Journal for Numerical and Analytical Methods in Geomechanics, 2019, 43, 353-380.	1.7	12
21	Effects of sample disturbance and heterogeneity on the triaxial behaviour of a Canadian oil sand at ambient and high temperatures. Acta Geotechnica, 2018, 13, 457.	2.9	2
22	Revisiting the existence of an effective stress for wet granular soils with micromechanics. International Journal for Numerical and Analytical Methods in Geomechanics, 2018, 42, 959-978.	1.7	16
23	On elastic deformations and decomposition of strain in granular media. International Journal of Solids and Structures, 2018, 138, 97-108.	1.3	14
24	A micromechanical $\frac{1}{4}$ stress expression for stress-strain behaviour of wet granular materials. Geomechanics for Energy and the Environment, 2018, 15, 10-18.	1.2	5
25	An elastoplastic description of frictional destructuration in natural clays and shales. Acta Geotechnica, 2018, 13, 911-924.	2.9	5
26	Statistical analysis of stress transmission in wet granular materials. International Journal for Numerical and Analytical Methods in Geomechanics, 2018, 42, 1935-1956.	1.7	10
27	$\frac{1}{4}$ -GM: A purely micromechanical constitutive model for granular materials. Mechanics of Materials, 2018, 126, 57-74.	1.7	9
28	Strain in Granular Media: Probabilistic Approach to Dirichlet Tessellation. Journal of Engineering Mechanics - ASCE, 2017, 143, .	1.6	13
29	Multiscale Approach to Micro-Poro-Mechanical Modelling of Unsaturated Shales. Springer Series in Geomechanics and Geoengineering, 2017, , 57-66.	0.0	2
30	Non-dissipative structural evolutions in granular materials within the small strain range. International Journal of Solids and Structures, 2017, 110-111, 94-105.	1.3	34
31	Strain Localization as a Function of Topological Changes in Mesoscopic Granular Structures. Springer Series in Geomechanics and Geoengineering, 2017, , 459-465.	0.0	2
32	Instability Analysis of Granular Media via a Purely Micromechanical Constitutive Model. Springer Series in Geomechanics and Geoengineering, 2017, , 507-513.	0.0	0
33	Non-Dissipative Structural Evolutions in Granular Materials. EPJ Web of Conferences, 2017, 140, 02014.	0.1	2
34	Partially Saturated Granular Materials: Insights from Micro-Mechanical Modelling., 2017, , .		2
35	Contact angle mechanical influence in wet granular soils. Acta Geotechnica, 2017, 12, 67-83.	2.9	40
36	Subtleties in discrete-element modelling of wet granular soils. Geotechnique, 2017, 67, 365-370.	2.2	16

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37	The micromechanical nature of stresses in triphasic granular media with interfaces. Journal of the Mechanics and Physics of Solids, 2017, 99, 495-511.	2.3	18
38	Multiscale Investigation of Microcrack-Induced Instability in Rocks. Springer Series in Geomechanics and Geoengineering, 2017, , 299-305.	0.0	0
39	Numerical study of interparticle bond failure by 3D discrete element method. International Journal for Numerical and Analytical Methods in Geomechanics, 2016, 40, 523-545.	1.7	23
40	Onset of structural evolution in granular materials as a redundancy problem. Granular Matter, 2016, 18, 1.	1.1	24
41	Stress in Wet Granular Media with Interfaces via Homogenization and Discrete Element Approaches. Journal of Engineering Mechanics - ASCE, 2016, 142, .	1.6	19
42	Hydro-mechanical description of fractured porous media based on microporomechanics. International Journal of Solids and Structures, 2016, 96, 274-287.	1.3	11
43	Failure in granular media from an energy viewpoint. Granular Matter, 2016, 18, 1.	1.1	13
44	MULTISCALE MODEL FOR DAMAGE-FLUID FLOW IN FRACTURED POROUS MEDIA. International Journal for Multiscale Computational Engineering, 2016, 14, 367-387.	0.8	4
45	A tensorial description of stresses in triphasic granular materials with interfaces. Geomechanics for Energy and the Environment, 2015, 4, 73-87.	1.2	13
46	Hierarchy of Failure Indicators in the Failure Analysis of Geomaterials. Springer Series in Geomechanics and Geoengineering, 2015, , 189-197.	0.0	0
47	Microstructural self-organization in granular materials during failure. Comptes Rendus - Mecanique, 2015, 343, 143-154.	2.1	14
48	Fabric and connectivity as field descriptors for deformations in granular media. Continuum Mechanics and Thermodynamics, 2015, 27, 243-259.	1.4	16
49	Failure Mechanics of Geomaterials. , 2015, , 137-169.		0
50	On the validity of the flow rule postulate for geomaterials. International Journal for Numerical and Analytical Methods in Geomechanics, 2014, 38, 863-880.	1.7	24
51	Microstructural formulation of stress dilatancy. Comptes Rendus - Mecanique, 2014, 342, 198-207.	2.1	4
52	Micromechanical Analysis of Force Transport in Wet Granular Soils. Vadose Zone Journal, 2014, 13, 1-12.	1.3	21
53	Prediction of Stimulated Reservoir Volume and Optimization of Fracturing in Tight Gas and Shale With a Fully Elasto-Plastic Coupled Geomechanical Model. SPE Journal, 2014, 19, 771-785.	1.7	36
54	Diffuse instabilities with transition to localization in loose granular materials. International Journal for Numerical and Analytical Methods in Geomechanics, 2013, 37, 1292-1311.	1.7	31

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55	Failure Mechanics of Geomaterials. , 2013, , 1-29.		0
56	Prediction And Optimization Of Fracturing In Tight Gas And Shale Using A Coupled Geomechanical Model Of Combined Tensile And Shear Fracturing. , 2012, , .		14
57	Inertia effects as a possible missing link between micro and macro second-order work in granular media. International Journal of Solids and Structures, 2012, 49, 1252-1258.	1.3	35
58	Instabilities and bifurcations in geomechanics. International Journal for Numerical and Analytical Methods in Geomechanics, 2011, 35, 111-111.	1.7	1
59	Elastoplastic modelling of diffuse instability response of geomaterials. International Journal for Numerical and Analytical Methods in Geomechanics, 2011, 35, 140-160.	1.7	22
60	Finite Element Modelling of Material Instability via an Enriched Elastoplastic Model. Springer Series in Geomechanics and Geoengineering, 2011, , 235-241.	0.0	0
61	Joint Stiffness and Deformation Behaviour of Discontinuous Rock. Journal of Canadian Petroleum Technology, 2010, 49, 78-86.	2.3	18
62	Finite element analysis of diffuse instability using an implicitly integrated pressureâ€density dependent elastoplastic model. Finite Elements in Analysis and Design, 2010, 46, 487-495.	1.7	2
63	Micromechanical Formulation of Stress Dilatancy as a Flow Rule in Plasticity of Granular Materials. Journal of Engineering Mechanics - ASCE, 2010, 136, 589-598.	1.6	18
64	Granular material response with respect to loading direction and material instability. European Journal of Environmental and Civil Engineering, 2009, 13, 219-233.	1.0	3
65	The possible influence of osmotic poration on cell membrane water permeability. Cryobiology, 2009, 58, 62-68.	0.3	12
66	A finite element model for cryosurgery with coupled phase change and thermal stress aspects. Finite Elements in Analysis and Design, 2008, 44, 288-297.	1.7	20
67	Experimental Investigation of Instabilities of Granular Materials in Relation to Dilatancy and Fabric Issues. , 2007, , 71-93.		2
68	Computing sand production under foamy oil flow in porous media via least-squares finite elements. Finite Elements in Analysis and Design, 2006, 42, 592-601.	1.7	5
69	BEHAVIOUR OF GRANULAR MATERIALS IN RELATION TO THEIR FABRIC DEPENDENCIES. Soils and Foundations, 2005, 45, 77-86.	0.7	16
70	Computation of sand fluidization phenomena using stabilized finite elements. Finite Elements in Analysis and Design, 2004, 40, 1681-1699.	1.7	17
71	A level set variational formulation for coupled phase change/mass transfer problems: application to freezing of biological systems. Finite Elements in Analysis and Design, 2004, 40, 1641-1663.	1.7	11
72	Stress Dilatancy and Fabric Dependencies on Sand Behavior. Journal of Engineering Mechanics - ASCE, 2004, 130, 635-645.	1.6	98

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73	A Finite Element Model for Ice Ball Evolution in a Multi-probe Cryosurgery. Computer Methods in Biomechanics and Biomedical Engineering, 2003, 6, 197-208.	0.9	36
74	Drained Cyclic Behavior of Sand with Fabric Dependence. Journal of Engineering Mechanics - ASCE, 2001, 127, 1106-1116.	1.6	57
75	A simple constitutive model for granular soils: Modified stress-dilatancy approach. Computers and Geotechnics, 1998, 22, 109-133.	2.3	175
76	Implicit integration algorithm for Hoek-Brown elastic-plastic model. Computers and Geotechnics, 1992, 14, 149-177.	2.3	17
77	A finite element method for the analysis of shear bands in geomaterials. Finite Elements in Analysis and Design, 1990, 7, 129-143.	1.7	16